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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	DEC 23	New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/ USPAT2
NEWS	4	JAN 13	IPC 8 searching in IFIPAT, IFIUDB, and IFICDB
NEWS	5	JAN 13	New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to INPADOC
NEWS	6	JAN 17	Pre-1988 INPI data added to MARPAT
NEWS	7	JAN 17	IPC 8 in the WPI family of databases including WPIFV
NEWS	8	JAN 30	Saved answer limit increased
NEWS	9	FEB 21	STN AnaVist, Version 1.1, lets you share your STN AnaVist visualization results
NEWS	10	FEB 22	The IPC thesaurus added to additional patent databases on STN
NEWS	11	FEB 22	Updates in EPFULL; IPC 8 enhancements added
NEWS	12	FEB 27	New STN AnaVist pricing effective March 1, 2006
NEWS	13	FEB 28	MEDLINE/LMEDLINE reload improves functionality
NEWS	14	FEB 28	TOXCENTER reloaded with enhancements
NEWS	15	FEB 28	REGISTRY/ZREGISTRY enhanced with more experimental spectral property data
NEWS	16	MAR 01	INSPEC reloaded and enhanced
NEWS	17	MAR 03	Updates in PATDPA; addition of IPC 8 data without attributes
NEWS	18	MAR 08	X.25 communication option no longer available after June 2006
NEWS	19	MAR 22	EMBASE is now updated on a daily basis
NEWS	20	APR 03	New IPC 8 fields and IPC thesaurus added to PATDPAFULL
NEWS	21	APR 03	Bibliographic data updates resume; new IPC 8 fields and IPC thesaurus added in PCTFULL
NEWS	22	APR 04	STN AnaVist $500 visualization usage credit offered
NEWS	23	APR 12	LINSPEC, learning database for INSPEC, reloaded and enhanced
NEWS	24	APR 12	Improved structure highlighting in FQHIT and QHIT display in MARPAT
NEWS	25	APR 12	Derwent World Patents Index to be reloaded and enhanced during second quarter; strategies may be affected

NEWS EXPRESS FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005.
V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT
http://download.cas.org/express/v8.0-Discover/

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specific topic.

* *

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=> s (Guo, Y?)/au
L1 16973 (GUO, Y?)/AU

=> s (Ma, J?)/au
L2 18064 (MA, J?)/AU

=> s l1 or l2
L3 34555 L1 OR L2

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=> s melanocytic or melanocyte#
L4       54154 MELANOCYTIC OR MELANOCYTE#

=> s l3 and l4
L5          17 L3 AND L4

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6           10 DUP REM L5 (7 DUPLICATES REMOVED)

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L6   ANSWER 1 OF 10  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        2006:290192  HCAPLUS
TITLE:                   Concordant loss of melanoma differentiation antigens
                         in synchronous and asynchronous melanoma metastases:
                         implications for immunotherapy
AUTHOR(S):               Trefzer, Uwe; Hofmann, Maja; Reinke, Susanne;
                         Guo, Ya-Jun; Audring, Heike; Spagnoli, Giulio;
                         Sterry, Wolfram
CORPORATE SOURCE:        aDepartment of Dermatology and Allergy, Skin Cancer
                         Centre, Charite-Universitaetsmedizin Berlin, Berlin,
                         Germany bTumour Immunology and Gene Therapy Centre,
                         Eastern Institute of Hepatobiliary Surgery, University
                         Hospital Basel, Basel, Switz.
SOURCE:                  Melanoma Research (2006), 16(2), 137-145
                         CODEN: MREEEH; ISSN: 0960-8931
PUBLISHER:               Lippincott Williams & Wilkins
DOCUMENT TYPE:           Journal
LANGUAGE:                English
AB   Because of its known heterogeneity, the anal. of antigen expression is
     crucial prior to the initiation of antigen-specific immunotherapy for
     melanoma.  The melanoma differentiation antigens gp100, MART-1 and
     tyrosinase are involved in a common pathway of melanin synthesis.
     Peptides derived from these melanoma differentiation antigens are used in
     the immunotherapy of melanoma and antibodies recognizing these antigens
     are commonly applied to detect melanocytic lesions.  One hundred
     and ninety-one paraffin-embedded melanoma metastases from 28 patients with
     2-19 lesions (mean, 6.8) developing synchronously (n=67) or asynchronously
     (n=124) were analyzed by immunohistochem. for the expression of the
     melanoma differentiation antigens, as well as cancer/testis antigens of
     the melanoma antigen-A (MAGE-A) family (monoclonal antibodies 77B and
     57B), anti-S100 and SM5-1.  The overall reactivities were 81.6% (gp100),
     79.5% (MART-1), 59.6% (tyrosinase), 59.1% (77B), 60.7% (57B), 93.2% (S100)
     and 91.6% (SM5-1).  Twenty-seven lesions (14.1%) were pos. for all
     tumor-associated antigens, 75 lesions (39.2%) were neg. for one antigen and
     87 lesions (45.5%) were neg. for several tumor-associated antigens.
     Coordinated loss was found for lesions neg. for gp100 and MART-1 (9.4%,
     P<0.0005), gp100 and tyrosinase (11.0%, P=0.009), MART-1 and tyrosinase
     (15.2%, P<0.0005) and gp100, MART-1 and tyrosinase (8.9%, P<0.0005), which
     is up to six times higher than the expected calculated loss.  This coordinated
     loss of melanoma differentiation antigens in melanoma did not include
     cancer testis antigens and S100 or SM5-1.  On average, the melanoma
     differentiation antigens stained 50-65% of cells within a lesion, and
     10-39% of synchronous clusters were heterogeneous for melanoma
     differentiation antigen expression.  In conclusion, broader polypeptide
     vaccines should be used for melanoma immunotherapy.

L6   ANSWER 2 OF 10     MEDLINE on STN                  DUPLICATE 1
ACCESSION NUMBER:   2006050213     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 16405722
```

TITLE: The monoclonal antibody SM5-1 recognizes a fibronectin variant which is widely expressed in melanoma.
AUTHOR: Trefzer Uwe; Chen Yingwen; Herberth Gunda; Hofmann Maja Ann; Kiecker Felix; Guo Yajun; Sterry Wolfram
CORPORATE SOURCE: Department of Dermatology and Allergy, Skin Cancer Center, Charite - Universitatsmedizin Berlin, Schumannstrasse 20/21, 10117 Berlin, Germany.. uwe.trefzer@charite.de
SOURCE: BMC cancer [electronic resource], (2006) Vol. 6, pp. 8. Electronic Publication: 2006-01-11. Journal code: 100967800. E-ISSN: 1471-2407.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200602
ENTRY DATE: Entered STN: 27 Jan 2006
Last Updated on STN: 22 Feb 2006
Entered Medline: 21 Feb 2006

AB BACKGROUND: Previously we have generated the monoclonal antibody SM5-1 by using a subtractive immunization protocol of human melanoma. This antibody exhibits a high sensitivity for primary melanomas of 99% (248/250 tested) and for metastatic melanoma of 96% (146/151 tested) in paraffin embedded sections. This reactivity is superior to the one obtained by HMB-45, anti-MelanA or anti-Tyrosinase and is comparable to anti-S100. However, as compared to anti-S100, the antibody SM5-1 is highly specific for melanocytic lesions since 40 different neoplasms were found to be negative for SM5-1 by immunohistochemistry. The antigen recognized by SM5-1 is unknown. METHODS: In order to characterize the antigen recognized by mAb SM5-1, a cDNA library was constructed from the metastatic human melanoma cell line SMMUpos in the Uni-ZAP lambda phage and screened by mAb SM5-1. The cDNA clones identified by this approach were then sequenced and subsequently analyzed. RESULTS: Sequence analysis of nine independent overlapping clones (length 3100-5600 bp) represent fibronectin cDNA including the ED-A, but not the ED-B region which are produced by alternative splicing. The 89aa splicing variant of the IIICS region was found in 8/9 clones and the 120aa splicing variant in 1/9 clones, both of which are included in the CS1 region of fibronectin being involved in melanoma cell adhesion and spreading. CONCLUSION: The molecule recognized by SM5-1 is a melanoma associated FN variant expressed by virtually all primary and metastatic melanomas and may play an important role in melanoma formation and progression. This antibody is therefore not only of value in immunohistochemistry, but potentially also for diagnostic imaging and immunotherapy.

L6 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:120682 HCAPLUS
TITLE: The monoclonal antibody SM5-1 recognizes a fibronectin variant which is widely expressed in melanoma
AUTHOR(S): Trefzer, Uwe; Chen, Yingwen; Herberth, Gunda; Hofmann, Maja Ann; Kiecker, Felix; Guo, Yajun; Sterry, Wolfram
CORPORATE SOURCE: Department of Dermatology and Allergy, Skin Cancer Center, Charite - Universitaetsmedizin Berlin, Berlin, 10117, Germany
SOURCE: BMC Cancer (2006), 6, No pp. given
CODEN: BCMACL; ISSN: 1471-2407
URL: http://www.biomedcentral.com/content/pdf/1471-2407-6-8.pdf
PUBLISHER: BioMed Central Ltd.
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English

AB Background Previously we have generated the monoclonal antibody SM5-1 by

using a subtractive immunization protocol of human melanoma. This antibody exhibits a high sensitivity for primary melanomas of 99% (248/250 tested) and for metastatic melanoma of 96% (146/151 tested) in paraffin embedded sections. This reactivity is superior to the one obtained by HMB-45, anti-MelanA or anti-Tyrosinase and is comparable to anti-S100. However, as compared to anti-S100, the antibody SM5-1 is highly specific for melanocytic lesions since 40 different neoplasms were found to be neg. for SM5-1 by immunohistochem. The antigen recognized by SM5-1 is unknown. Methods In order to characterize the antigen recognized by mAb SM5-1, a cDNA library was constructed from the metastatic human melanoma cell line SMMUpos in the Uni-ZAP lambda phage and screened by mAb SM5-1. The cDNA clones identified by this approach were then sequenced and subsequently analyzed. Results Sequence anal. of nine independent overlapping clones (length 3100-5600 bp) represent fibronectin cDNA including the ED-A, but not the ED-B region which are produced by alternative splicing. The 89aa splicing variant of the IIICS region was found in 8/9 clones and the 120aa splicing variant in 1/9 clones, both of which are included in the CS1 region of fibronectin being involved in melanoma cell adhesion and spreading. Conclusions The mol. recognized by SM5-1 is a melanoma associated FN variant expressed by virtually all primary and metastatic melanomas and may play an important role in melanoma formation and progression. This antibody is therefore not only of value in immunohistochem., but potentially also for diagnostic imaging and immunotherapy.

REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 10 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
DUPLICATE 2

ACCESSION NUMBER: 2005-30574 BIOTECHDS

TITLE: New monoclonal antibody that specifically binds to an antigen of human melanoma cells, useful in preparing a composition for diagnosing or treating melanoma;
hybridoma cell culture for use in antibody production for disease diagnosis and therapy

AUTHOR: GUO Y; MA J

PATENT ASSIGNEE: GUO Y; MA J

PATENT INFO: US 2005227303 13 Oct 2005

APPLICATION INFO: US 2005-146518 6 Jun 2005

PRIORITY INFO: US 2005-146518 6 Jun 2005; US 1998-110516 1 Dec 1998

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 2005-723950 [74]

AN 2005-30574 BIOTECHDS

AB DERWENT ABSTRACT:

NOVELTY - A monoclonal antibody that specifically binds to an antigen of human melanoma cells, where the antigen is bound by the antibody produced by the hybridoma deposited under ATCC Accession Number 12588 and the antigen is present on the membrane and in the cytoplasm of human melanoma cells, but is not present in normal non-activated human melanocytic cells and non-melanocytic human tumor cells in an amount that is detectable by the antibody, is new.

WIDER DISCLOSURE - Disclosed is a test kit for qualitative and quantitative determination of the melanoma-associated antigen comprising the monoclonal antibody of the invention.

ACTIVITY - Cytostatic. No biological data given.

MECHANISM OF ACTION - Vaccine.

USE - The monoclonal antibody is useful in preparing a composition for diagnosing or treating melanoma.

ADMINISTRATION - Dosage comprises 1-200 mg/kg body weight. The composition is administered via oral or parenteral route.

EXAMPLE - No relevant examples given.(12 pages)

L6 ANSWER 5 OF 10 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:1005415 SCISEARCH
THE GENUINE ARTICLE: 969PE
TITLE: Differential expression of MART-1, tyrosinase, and SM5-1 in primary and metastatic melanoma
AUTHOR: Reinke S; Koniger P; Herberth G; Audring H; Wang H; Ma J; Guo Y J; Sterry F; Trefzer U (Reprint)
CORPORATE SOURCE: Charite Univ Med Berlin, Skin Canc Ctr, Dept Dermatol & Allergy, Schumannstr 20-21, D-10117 Berlin, Germany (Reprint); Charite Univ Med Berlin, Skin Canc Ctr, Dept Dermatol & Allergy, D-10117 Berlin, Germany; Univ G DAnnunzio, Dept Dermatol, Chieti, Italy; Mil Med Coll 2, Int Canc Institut, Shanghai, Peoples R China; Mil Med Coll 2, Eastern Inst Hepatobiliary Surg, Shanghai, Peoples R China
uwe.trefzer@charite.de
COUNTRY OF AUTHOR: Germany; Italy; Peoples R China
SOURCE: AMERICAN JOURNAL OF DERMATOPATHOLOGY, (OCT 2005) Vol. 27, No. 5, pp. 401-406.
ISSN: 0193-1091.
PUBLISHER: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3261 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 19
ENTRY DATE: Entered STN: 20 Oct 2005
Last Updated on STN: 20 Oct 2005
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB The new monoclonal antibody SM5-1 has been shown to have significant advantages in immunohistochemistry of melanoma over currently used antibodies such as HMB-45 or anti-S100. In this study we compared the immunohistological staining pattern of SM5-1 with that of the more recently described antibodies A103 (anti-MART-1) and T311 (anti-Tyrosinase) in 344 paraffin-embedded melanoma specimens, consisting of 101 primary melanomas (77 SSM, 16 NM, 6 ALM, 2 LMM) and 243 melanoma metastases. The overall reactivity of SM5-1 for all the specimens was 92% (318/344) compared with 83% (285/344) for MART-I and 71% (245/344) for Tyrosinase. Staining of melanoma metastases with SM5-1 was found in 91% (222/243), but only in 77% (187/243) with A103 and 63% (154/243) with T311, respectively. Staining with SM5-1 was more homogenous with 196 of 243 (80%) of metastatic lesions showing 50% or more positively stained cells within the lesions, whereas A103 and T311 did so in 141 of 243 (58%) or 117 of 243 (48%) of the lesions. With regard to staining intensity of SM5-1, 157 of 243 (64%) showed a strong or very strong staining intensity, whereas A103 and T311 did so in 85 of 243 (35%) or 70 of 243 (29%) of the lesions. Staining intensity and percentage positivity correlated well for SM5-1, because from the 58 very strong positive metastases 55 showed staining in more than 75% of the cells within a lesion. Importantly, 52 of 56 MART-1-negative metastases and 81 of 89 Tyrosinase-negative metastases were positive for SM5-1. Thirty-eight metastases (15.6%) were negative for both A] 03 and T311. Of those, 35 (92.1%) were positive for SM5-1, demonstrating the value of SM5-1 in identifying melanoma-associated antigen-negative lesions. We conclude that SM5-1 could be of value in immunohistochemistry of melanoma.

L6 ANSWER 6 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:248723 BIOSIS
DOCUMENT NUMBER: PREV200510042045
TITLE: Effects of ethanol extracts of several traditional Chinese

medicinal herbs on tyrosinase expression and melanogenesis in guinea pig skin.
AUTHOR(S): Ma Jing-xin [Reprint Author]; Tu Cai-xia; Chen Xiao-yan; Zhang Kai-li; Liu Jia; Li Hong
CORPORATE SOURCE: Dalian Med Univ, Affiliated Hosp 2, Dept Dermatol, Dalian 116027, Peoples R China
SOURCE: Zhonghua Pifuke Zazhi, (FEB 15 2005) Vol. 38, No. 2, pp. 92-94.
CODEN: CHFTAJ. ISSN: 0412-4030.
DOCUMENT TYPE: Article
LANGUAGE: Chinese
ENTRY DATE: Entered STN: 8 Jul 2005
Last Updated on STN: 8 Jul 2005

AB Objective To explore the effects of traditional Chinese medicinal herbs (TCMHs) on the expression of tyrosinase gene, melanogenesis and proliferation of melanocytes and elucidate the mechanism of TCMHs in promoting melanogenesis. Methods Seven TCMHs including Herba Ecliptae, Spica Prunellae, Caulis Spatholobi, etc, which were known to be effective in activating tyrosinase in vivo, were selected. Brownish guinea pigs were selected as the experimental model. The mRNA in situ hybridization (ISH). Schmorl-staining and dopa-oxygenase staining were performed to observe the effects of TCMHs on gene expression of tyrosinase, melanogenesis and melanocyte proliferation. Results The mRNA ISH showed that these seven drugs, especially Herba Ecliptae Spica Prunellae and Tribulus terrestris could significantly increase the number of positive cells and the intensity of hybridization signal in the treated group as compared with that in the control group ($P < 0.01$). In Schmorl staining and dopa-oxygenase staining, the number of cells containing melanin granules and dopa-staining positive cells per 100 basal layer cells were significantly increased in TCM treated groups ($P < 0.05$), and these two effects of TCMF's were not parallel with each other ($P > 0.1$). Conclusions These results suggested that these 7 TCMHs including Herba Ecliptae can upregulate the gene expression of tyrosinase, enhance the melanogenesis and promote the proliferation of melanocytes.

L6 ANSWER 7 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 3
ACCESSION NUMBER: 2004:106141 BIOSIS
DOCUMENT NUMBER: PREV200400109552
TITLE: Biological effects of glabridin on melanocytes.
AUTHOR(S): Ma Jing-bo [Reprint Author]; Huang Lan [Reprint Author]; Feng Shu-fang [Reprint Author]; Zheng Zhi-zhong [Reprint Author]; Zhu Lu-chuan [Reprint Author]
CORPORATE SOURCE: Department of Dermatology, Huashan Hospital, Fudan University, Shanghai, 200040, China
SOURCE: Zhonghua Pifuke Zazhi, (October 2003) Vol. 36, No. 10, pp. 586-588. print.
ISSN: 0412-4030 (ISSN print).
DOCUMENT TYPE: Article
LANGUAGE: Chinese
ENTRY DATE: Entered STN: 25 Feb 2004
Last Updated on STN: 25 Feb 2004

AB Objective: To study the effects of glabridin on human melanocytes and B16 murine melanoma cells. Methods: After glabridin was added into the two kinds of cultured melanocytes, the cell viability, tyrosinase activity and melanin contents were measured, respectively. The effects of glabridin were compared with those of hydroquinone. Results: It was shown that the effects of glabridin and hydroquinone on two kinds of cells were different. Compared with hydroquinone, glabridin had a concentration-dependent inhibition on melanogenesis and little influence on melanocyte viability. Conclusion: There is a biological diversity between human melanocytes and murine melanoma cells.

It is indicated that glabridin is a safe and active ingredient for depigmentation.

L6 ANSWER 8 OF 10 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2001233052 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11214818
TITLE: SM5-1: a new monoclonal antibody which is highly sensitive and specific for melanocytic lesions.
AUTHOR: Trefzer U; Rietz N; Chen Y; Audring H; Herberth G; Siegel P; Reinke S; Koniger P; Wu S; Ma J; Liu Y; Wang H; Sterry W; Guo Y
CORPORATE SOURCE: Department of Dermatology and Allergy, Charite, Humboldt University Berlin, Germany.. uwe.trefzer@charite.de
SOURCE: Archives of dermatological research, (2000 Dec) Vol. 292, No. 12, pp. 583-9.
Journal code: 8000462. ISSN: 0340-3696.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 17 May 2001
Last Updated on STN: 17 May 2001
Entered Medline: 3 May 2001
AB Antibodies such as HMB-45 and anti-S100 protein have been widely used as markers of malignant melanoma despite evidence that HMB-45 has a sensitivity of only 67-93% and S100 is nonspecific for melanoma. Using a subtractive immunization protocol in a mouse model of human melanoma, we have generated several monoclonal antibodies with putative specificity for melanoma. After initial screenings, the antibody SM5-1 was chosen because of its intriguing reactivity with melanocytic tumors in both frozen and paraffin sections. The immunohistochemical staining of SM5-1 was studied in paraffin-embedded specimens of 401 melanomas (n = 401; 250 primary melanomas, 151 metastases), melanocytic nevi of the skin (n = 16), nonmelanocytic neoplasms (n = 84). The results were compared with HMB-45 and anti-S100 staining. All antibodies reacted with nevi and 97-99% with primary melanomas. Whereas both SM5-1 and anti-S100 stained 96% (146/151) of melanoma metastases, HMB-45 correctly identified only 83% (126/151). All HMB-45-negative metastases were positive for SM5-1. Whereas neither SM5-1 nor HMB-45 stained any of 84 specimens from 40 different nonmelanocytic neoplasms, anti-S100 was positive in 21/84 (25%). While the staining pattern of SM5-1 was mostly homogeneous, small tumor areas in some metastases remained unstained. Staining with SM5-1 was also observed in perivascular dendritic cells, in plasma cells, some myofibroblasts and the secretion of eccrine sweat glands. Nonactivated epidermal melanocytes, keratinocytes, endothelial cells, smooth muscle cells and peripheral nerves were all negative for SM5-1. These results suggest that SM5-1 is highly specific, as well as sensitive, for melanocytic lesions and is useful in the immunohistochemical evaluation of melanoma.

L6 ANSWER 9 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 5
ACCESSION NUMBER: 1998:248010 BIOSIS
DOCUMENT NUMBER: PREV199800248010
TITLE: SM5-1: A new monoclonal antibody which is highly sensitive and specific for melanocytic tumors.
AUTHOR(S): Trefzer, Uwe; Herberth, Gunda; Chen, Ying-Wen; Rietz, Nadine; Audring, Heike; Siegel, Petra; Adrian, Karin; Winter, Helmut; Guo, Ya-Jun; Sterry, Wolfram
CORPORATE SOURCE: Dep. Dermatol., Humboldt-Univ., Charite, Berlin, Germany
SOURCE: Journal of Investigative Dermatology, (April, 1998) Vol.

110, No. 4, pp. 581. print.
Meeting Info.: Annual Meeting of the International Investigative Dermatology. Cologne, Germany. May 7-10, 1998. The Society for Investigative Dermatology, Inc.
CODEN: JIDEAE. ISSN: 0022-202X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 4 Jun 1998
Last Updated on STN: 4 Jun 1998

L6 ANSWER 10 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:292615 BIOSIS
DOCUMENT NUMBER: PREV199800292615
TITLE: SM5-1: A new monoclonal antibody which is highly sensitive and specific for melanocytic tumors.
AUTHOR(S): Trefzer, Uwe; Herberth, Gunda; Chen, Ying-Wen; Rietz, Nadine; Audring, Heike; Siegel, Petra; Adrian, Karin; Winter, Helmut; Guo, Ya-Jun; Sterry, Wolfram
CORPORATE SOURCE: Dep. Dermatology, Humbodlt-Univ., Chartie, Berlin, Germany
SOURCE: Journal of Dermatological Science, (March, 1998) Vol. 16, No. SUPPL. 1, pp. S110. print.
Meeting Info.: Third Joint Meeting of the European Society for Dermatological Research, Japanese Society for Investigative Dermatology, Society for Investigative Dermatology. Cologne, Germany. May 7-10, 1998. European Society for Dermatological Research; Japanese Society for Investigative Dermatology; Society for Investigative Dermatology.
CODEN: JDSCEI. ISSN: 0923-1811.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 8 Jul 1998
Last Updated on STN: 8 Jul 1998

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FULL ESTIMATED COST                                       0.06      31.46

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                       0.00      -1.50

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             0 FIBRONECTIN#
             0 OPSONIC
             0 GLYCOPROTEIN#
             0 OPSONIC(4W)GLYCOPROTEIN#
L7           0 FIBRONECTIN# OR (OPSONIC(4W)GLYCOPROTEIN#)

=> file medline biosis lifesci  biotechds scisearch hcaplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.30      31.70

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
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FILE 'HCAPLUS' ENTERED AT 12:03:27 ON 28 APR 2006
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=> s fibronectin# or (opsonic(4w)glycoprotein#)
L8      113501 FIBRONECTIN# OR (OPSONIC(4W) GLYCOPROTEIN#)

=> s l8(5a)variant#
L9          579 L8(5A) VARIANT#

=> s melanoma(s)l9
L10          13 MELANOMA(S) L9

=> s l10 and py<2000
   1 FILES SEARCHED...
L11           6 L10 AND PY<2000

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12           2 DUP REM L11 (4 DUPLICATES REMOVED)

=> d ibib abs tot

L12  ANSWER 1 OF 2  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
ACCESSION NUMBER:   1998:457759  BIOSIS
DOCUMENT NUMBER:    PREV199800457759
TITLE:              A melanoma associated fibronectin
                    variant characterized by monoclonal antibody SM5-1.
AUTHOR(S):          Chen, Y.; Guo, Y. J.; Herberth, G.; Adrian, K.; Siegel, P.;
                    Audring, H.; Hansen-Hagge, T.; Sterry, W.; Trefzer, U.
CORPORATE SOURCE:   Dep. Dermatol., Charite, Humboldt Univ., 10115 Berlin,
                    Germany
SOURCE:             Journal of Molecular Medicine (Berlin), (May, 1998
                    ) Vol. 76, No. 6, pp. B11. print.
                    Meeting Info.: 2nd Congress of Molecular Medicine. Berlin,
                    Germany. May 6-9, 1998.
                    ISSN: 0946-2716.
DOCUMENT TYPE:      Conference; (Meeting)
                    Conference; Abstract; (Meeting Abstract)
LANGUAGE:           English
ENTRY DATE:         Entered STN: 30 Oct 1998
                    Last Updated on STN: 30 Oct 1998

L12  ANSWER 2 OF 2     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:   95050453     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 7525548
TITLE:              Integrin alpha 4 beta 1-mediated melanoma cell adhesion and
                    migration on vascular cell adhesion molecule-1 (VCAM-1) and
                    the alternatively spliced IIICS region of fibronectin.
AUTHOR:             Mould A P; Askari J A; Craig S E; Garratt A N; Clements J;
                    Humphries M J
CORPORATE SOURCE:   School of Biological Sciences, University of Manchester,
                    United Kingdom.
SOURCE:             The Journal of biological chemistry, (1994 Nov 4)
                    Vol. 269, No. 44, pp. 27224-30.
                    Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
```

ENTRY MONTH: 199411
ENTRY DATE: Entered STN: 10 Jan 1995
Last Updated on STN: 3 Feb 1997
Entered Medline: 29 Nov 1994

AB The integrin receptor alpha 4 beta 1 (also known as VLA-4) binds two different ligands, the endothelial cell surface protein vascular cell adhesion molecule-1 (VCAM-1) and the extracellular matrix component fibronectin. Three distinct sites in fibronectin are recognized by alpha 4 beta 1. Two of these (represented by peptides CS1 and CS5) are present in the alternatively spliced IIICS region and lie in separate, independently spliced segments of this region. A third site resides in the adjacent constitutively expressed HepII domain. Recombinant proteins containing the HepII domain and different splice variants of the IIICS have been generated and compared for their ability to mediate cell attachment, spreading and migration. The activity of these proteins has also been compared with that of a recombinant soluble form of VCAM-1 (rsVCAM-1). All the recombinant proteins supported A375-SM human melanoma cell attachment and spreading in an alpha 4 beta 1-dependent manner, but had varied adhesive activities with rsVCAM-1 > fibronectin variants containing the CS1 sequence >> other fibronectin variants. Low concentrations of rsVCAM-1 and CS1-containing fibronectin variants effectively supported cell migration in a trans-filter assay; however, cell motility was retarded at high concentrations of the same proteins. Fibronectin variants lacking CS1 supported little or no migration. To obtain further insight into the molecular basis of this varied adhesive activity, apparent dissociation constants for each of the recombinant proteins were measured using a solid phase receptor-ligand binding assay. The results revealed a hierarchy of ligand affinities that mirrored their adhesive activity (rsVCAM-1 > fibronectin variants containing CS1 >> other fibronectin variants).

=> d history

(FILE 'HOME' ENTERED AT 11:42:16 ON 28 APR 2006)

FILE 'MEDLINE, BIOSIS, LIFESCI, BIOTECHDS, SCISEARCH, HCAPLUS' ENTERED AT 11:42:31 ON 28 APR 2006
L1 16973 S (GUO, Y?)/AU
L2 18064 S (MA, J?)/AU
L3 34555 S L1 OR L2
L4 54154 S MELANOCYTIC OR MELANOCYTE#
L5 17 S L3 AND L4
L6 10 DUP REM L5 (7 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 11:47:07 ON 28 APR 2006
L7 0 S FIBRONECTIN# OR (OPSONIC(4W)GLYCOPROTEIN#)

FILE 'MEDLINE, BIOSIS, LIFESCI, BIOTECHDS, SCISEARCH, HCAPLUS' ENTERED AT 12:03:27 ON 28 APR 2006
L8 113501 S FIBRONECTIN# OR (OPSONIC(4W)GLYCOPROTEIN#)
L9 579 S L8(5A)VARIANT#
L10 13 S MELANOMA(S)L9
L11 6 S L10 AND PY<2000
L12 2 DUP REM L11 (4 DUPLICATES REMOVED)

=> s melanoma#(3a)fibronectin#
L13 328 MELANOMA#(3A) FIBRONECTIN#

=> s l13 and py<2000
1 FILES SEARCHED...

```
L14        238 L13 AND PY<2000

=> melanoma#(3a)(express? or upregulat? or associat? or specific)
MELANOMA#(3A)(EXPRESS? IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s melanoma#(3a)(express? or upregulat? or associat? or specific)
L15      24321 MELANOMA#(3A)(EXPRESS? OR UPREGULAT? OR ASSOCIAT? OR SPECIFIC)

=> s l15(5a)fibronectin#
L16         32 L15(5A) FIBRONECTIN#

=> s l16 and py<2000
   1 FILES SEARCHED...
L17         19 L16 AND PY<2000

=> dup rem l17
PROCESSING COMPLETED FOR L17
L18          10 DUP REM L17 (9 DUPLICATES REMOVED)

=> d ibib abs tot

L18  ANSWER 1 OF 10  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
ACCESSION NUMBER:   1998:457759  BIOSIS
DOCUMENT NUMBER:    PREV199800457759
TITLE:              A melanoma associated
                    fibronectin variant characterized by monoclonal
                    antibody SM5-1.
AUTHOR(S):          Chen, Y.; Guo, Y. J.; Herberth, G.; Adrian, K.; Siegel, P.;
                    Audring, H.; Hansen-Hagge, T.; Sterry, W.; Trefzer, U.
CORPORATE SOURCE:   Dep. Dermatol., Charite, Humboldt Univ., 10115 Berlin,
                    Germany
SOURCE:             Journal of Molecular Medicine (Berlin), (May, 1998
                    ) Vol. 76, No. 6, pp. B11. print.
                    Meeting Info.: 2nd Congress of Molecular Medicine. Berlin,
                    Germany. May 6-9, 1998.
                    ISSN: 0946-2716.
DOCUMENT TYPE:      Conference; (Meeting)
                    Conference; Abstract; (Meeting Abstract)
LANGUAGE:           English
ENTRY DATE:         Entered STN: 30 Oct 1998
                    Last Updated on STN: 30 Oct 1998

L18  ANSWER 2 OF 10     MEDLINE on STN                  DUPLICATE 1
ACCESSION NUMBER:   96183755     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 8608953
TITLE:              Interaction with fibronectin regulates cytokine
                    gene expression in human melanoma
                    cells.
AUTHOR:             Lupetti R; Mortarini R; Panceri P; Sensi M; Anichini A
CORPORATE SOURCE:   Division of Experimental Oncology D, Istituto Nazionale
                    Tumori, Milan, Italy.
SOURCE:             International journal of cancer. Journal international du
                    cancer, (1996 Mar 28) Vol. 66, No. 1, pp. 110-6.
                    Journal code: 0042124. ISSN: 0020-7136.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        199605
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ENTRY DATE: Entered STN: 5 Jun 1996
Last Updated on STN: 5 Jun 1996
Entered Medline: 29 May 1996

AB Our study was aimed at investigating whether interaction of human melanoma cells with the extracellular matrix (ECM) protein fibronectin (FN) could regulate lymphokine gene expression. Serum-deprived cells (quiescent condition) of a metastatic melanoma cloned line were cultured either on uncoated or on FN- or BSA-coated surfaces. By means of reverse transcriptase- polymerase chain reaction (RT-PCR), we analyzed mRNA expression of 4 cytokines interleukin (IL)-1alpha, IL, 1beta, IL-6 and IL-8-and 9 growth factors-endothelial cell growth factor (ECGF), basic fibroblast growth factor (bFGF), fibroblast growth factor (FGF)-5, HST, keratinocyte growth factor (KGF), transforming growth factor (TGF)-alpha TGF-beta1, TGF-beta2 and TGF-beta3. When cultured on FN, melanoma cells expressed IL-1beta and IL-6 transcripts in addition to IL-1beta, IL-8, ECGF, TGF-beta1, TGF-beta2 and TGF-beta3, already present in quiescent cells. Amplification parameters to achieve semi-quantitative RT-PCR were then determined for each detectable factor, thus allowing us to measure a selective enhancement of mRNA levels for IL-1alpha, IL-6, IL-8 and TGF-beta2 upon interaction with FN by quiescent melanoma cells. This augmented expression was inhibited by an anti-integrin beta1 chain monoclonal antibody (MAb). Moreover, the amounts of IL-6, IL-8 and IL-beta produced in the supernatants, as assessed by ELISA, correlated with the corresponding mRNA expression. Extension of this analysis to the other 5 human primary and metastatic melanoma lines confirmed the ability of FN to selectively up-regulate only IL-6 and IL-8 secretion. Our data indicate that FN is able to modulate expression and secretion of a defined subset of lymphokines in human melanoma.

L18 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:299273 HCAPLUS
DOCUMENT NUMBER: 125:25725
TITLE: Inhibition of cellular chemotactic invasion by a Vinca alkaloid, conophylline
AUTHOR(S): Amino, Nobuaki; Ohse, Takuhito; Koyano, Takashi; Umezawa, Kazuo
CORPORATE SOURCE: Faculty Science and Technology, Keio University, Yokohama, 223, Japan
SOURCE: Anticancer Research (1996), 16(1), 55-59
CODEN: ANTRD4; ISSN: 0250-7005
PUBLISHER: Anticancer Research
DOCUMENT TYPE: Journal
LANGUAGE: English

AB K-ras-NIH3T3 cells were more invasive than NIH3T3 cells in a chemotactic invasion assay. Conophylline, a new vinca alkaloid isolated as a ras function inhibitor, inhibited the invasion of K-ras-NIH3T3 cells, while it showed no effect on NIH3T3 cells. Conophylline did not increase expression of fibronectin but induced E-cadherin expression in K-ras-NIH3T3 cells. Mouse melanoma B16/F10 is a highly metastatic cell line. Conophylline was found to induce flat morphol. in B16/F10 cells and it again inhibited the invasion of the cells to the matrigel membrane. It induced fibronectin expression but not E-cadherin expression in B 16/F10 cells. Thus, conophylline lowered invasiveness of K-ras-NIH3T3 and B 16/F10 cells by reversing neoplastic phenotypes.

L18 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:485283 HCAPLUS
DOCUMENT NUMBER: 122:262473
TITLE: Acquisition of in vitro growth autonomy during B16 melanoma malignant progression is associated with autocrine stimulation by transferrin and fibronectin
AUTHOR(S): Stackpole, Christopher W.; Kalbag, Suraj S.; Groszek,

Laura
CORPORATE SOURCE: Department of Experimental Pathology, New York Medical College, Valhalla, NY, 10595, USA
SOURCE: In Vitro Cellular & Developmental Biology: Animal (1995), 31(3), 244-51
CODEN: IVCAED; ISSN: 1071-2690
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Four mouse B16 melanoma subclones representing distinct stages in the benign-to-malignant progression of that tumor (G3.15, G3.5, G3.12, and G3.26), and three phenotype conversion variants with enhanced malignancy (G3.15*, G3.5*, and G3.12*), were comparatively examined for exogenous mitogen and growth factor requirements and for responsiveness to exogenous and endogenous growth modulators in monolayer culture. Growth behavior in serum-free medium with or without mitogen or growth factor supplements, and in supplemented quiescent serum-containing medium, confirmed previous indications that the G3.5 and G3.15* phenotypes were identical, as were the G3.26 and G3.12* phenotypes. However, G3.12 differed from the closest conversion equivalent, G3.5*, and probably represents an aberrant phenotype within this sequence. There was a direct relation between degree of malignancy (G3.15 → G3.5 → G3.5* → G3.26), growth capacity in serum-free medium, and responsiveness to transferrin. Only G3.5*, G3.26, and G3.12* cells were growth-autonomous in serum-free medium and also highly responsive to mitogens. The polypeptide growth factors epidermal growth factor, platelet-derived growth factor, basic fibroblast growth factor, transforming growth factor-α, and insulin-like growth factor-1 and -2 were generally stimulatory in quiescent medium, but the degree of growth promotion was unrelated to malignancy level. Transforming growth factor-β1 was inhibitory to the more benign populations (G3.15, G3.5, and G3.15*) but stimulated proliferation of other cells. All populations produced autocrine fibronectin, and G3.12, G3.5*, G3.26, and G3.12* cells also produced autocrine transferrin. Only G3.12 cells failed to utilize both of those factors. Reversible mitogen-stimulated G3.12 cell growth was accompanied by partial and reversible responsiveness to both autocrine transferrin and fibronectin, whereas permanent stimulation by both factors characterized all growth-autonomous populations.

L18 ANSWER 5 OF 10 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1992-04457 BIOTECHDS
TITLE: New artificial functional polypeptide for inhibiting cancer metastasis;
human recombinant fibronectin cell adhesion domain-melanoma adhesion active site fusion protein production; plasmid pCS25 expression in Escherichia coli; pot. antimetastatic
PATENT ASSIGNEE: Takara-Shuzo
PATENT INFO: JP 03284700 16 Dec 1991
APPLICATION INFO: JP 1990-80676 30 Mar 1990
PRIORITY INFO: JP 1990-80676 30 Mar 1990
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
OTHER SOURCE: WPI: 1992-037731 [05]
AN 1992-04457 BIOTECHDS
AB The following are new: i. a recombinant functional protein in which a human fibronectin cell adhesion domain peptide and a melanoma adhesion active site are bonded directly or indirectly; ii. an inhibitor of cancer metastasis which contains the protein; and iii. an inhibitor of cancer metastasis which contains the functional protein of human fibronectin adhesion active site specific for melanoma cells. In an example, a CS1 peptide composed of 25 amino acids was chemically synthesized. Plasmid pCS25 was constructed

which expressed the human fibronectin cell adhesion domain Pro1239-Ser1515 (277 amino acids)-CS1 fusion protein in Escherichia coli HB101. E. coli HB101/pCS25 was deposited as FERM P-11339. By culturing the transformant, the fusion protein was produced and purified. C57BL/6 and B16-BL6 melanoma cells were used to test the cancer metastasis inhibiting activity of the fusion protein. (8pp)

L18 ANSWER 6 OF 10 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 91115970 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1703545
TITLE: The vitronectin receptor alpha v beta 3 binds fibronectin and acts in concert with alpha 5 beta 1 in promoting cellular attachment and spreading on fibronectin.
AUTHOR: Charo I F; Nannizzi L; Smith J W; Cheresh D A
CORPORATE SOURCE: COR Therapeutics, Inc., South San Francisco, California 94080.
SOURCE: The Journal of cell biology, (1990 Dec) Vol. 111, No. 6 Pt 1, pp. 2795-800.
Journal code: 0375356. ISSN: 0021-9525.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199103
ENTRY DATE: Entered STN: 29 Mar 1991
Last Updated on STN: 3 Feb 1997
Entered Medline: 1 Mar 1991

AB The vitronectin receptor (alpha v beta 3) is a member of the integrin superfamily of adhesive protein receptors that mediate a wide spectrum of adhesive cellular interactions, including attachment to vitronectin, von Willebrand factor, fibrinogen, and thrombospondin. We have studied the binding of fibronectin to the purified vitronectin receptor, and the role of this receptor in the attachment of cells to fibronectin. A solid-phase microtiter assay was developed to investigate the binding properties of the vitronectin receptor. Purified alpha v beta 3 bound fibronectin with high affinity in a saturable, divalent cation-dependent manner. Binding was inhibited by soluble vitronectin, by RGD-containing peptides, and by LM609, a monoclonal antibody against the vitronectin receptor known to inhibit the binding of adhesive proteins to alpha v beta 3. Immunoinhibition experiments showed that M21 human melanoma cells, which express the fibronectin receptor, alpha 5 beta 1, as well as alpha v beta 3, used both of these integrins to attach and spread on fibronectin. In support of this finding, M21-L cells, a variant cell line that specifically lacks alpha v beta 3 but expresses alpha v beta 1, attached and spread poorly on fibronectin. In addition, alpha v beta 3 from surface-labeled M21 cells was retained, and selectively eluted by RGDS from a fibronectin affinity column. These results indicate that alpha v beta 3 acts in concert with alpha 5 beta 1 in promoting fibronectin recognition by these cells. We conclude that fibronectin binds to the alpha v beta 3 vitronectin receptor specifically and with high affinity, and that this interaction is biologically relevant in supporting cell adhesion to matrix proteins.

L18 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:227384 HCAPLUS
DOCUMENT NUMBER: 110:227384
TITLE: Identification of two distinct regions of an alternatively spliced site in human plasma fibronectin that promotes cell-type specific adhesion
AUTHOR(S): Humphries, Martin J.; Komoriya, Akira; Akiyama, Steven K.; Olden, Kenneth; Yamada, Kenneth M.
CORPORATE SOURCE: Cancer Cent., Howard Univ., Washington, DC, 20060, USA

SOURCE: Pept.: Chem. Biol., Proc. Am. Pept. Symp. 10th (1988), Meeting Date 1987, 632-4. Editor(s): Marshall, Garland R. ESCOM Sci. Pub.: Leiden, Neth. CODEN: 56MDA6
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Two distinct regions of alternatively spliced site were identified in human plasma fibronectin. This cell-type specific adhesion site (which promotes melanoma cell but not fibroblastic kidney cell adhesion) was localized in the type III connecting segment (CS). Results suggested both regions of III CS function sep. or together in mediating melanoma cell interactions with fibronectin.

L18 ANSWER 8 OF 10 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 86196262 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3084502
TITLE: Disialoganglioside GD2 distributes preferentially into substrate-associated microprocesses on human melanoma cells during their attachment to fibronectin.
AUTHOR: Cheresh D A; Klier F G
CONTRACT NUMBER: CA 28420 (NCI)
SOURCE: The Journal of cell biology, (1986 May) Vol. 102, No. 5, pp. 1887-97.
Journal code: 0375356. ISSN: 0021-9525.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198606
ENTRY DATE: Entered STN: 21 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 12 Jun 1986
AB Human melanoma cells (M21) actively attach and spread on a fibronectin substrate. Indirect immunofluorescence assays with specific monoclonal antibodies directed to the disialoganglioside GD2, the major ganglioside expressed on M21 melanoma cells, indicate that during the cell attachment process this molecule redistributes into microprocesses that make direct contact with the fibronectin substrate. Scanning and transmission immunoelectron microscopic studies with anti-GD2 monoclonal antibodies and immuno-gold staining demonstrate that GD2 preferentially localizes into substrate-associated microprocesses that emanate from the plasma membrane of the M21 cells. Staining with monoclonal antibodies directed to other melanoma surface antigens fails to demonstrate a similar distribution pattern on these cells. Direct evidence is provided that GD2 is involved in M21 cell attachment to fibronectin, since treatment of these cells with anti-GD2 monoclonal antibodies causes cell rounding and detachment from a fibronectin substrate. Moreover, scanning electron microscopy demonstrates that this loss of attachment of fibronectin is characterized by a perturbation of the cell attachment-promoting microprocesses that in the presence of these antibodies lose contact with the fibronectin substrate.

L18 ANSWER 9 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1986:15719 BIOSIS
DOCUMENT NUMBER: PREV198630015719; BR30:15719
TITLE: ANALYSIS OF FIBRONECTIN ASSOCIATED WITH MELANOMA TUMOR CELLS IN-VITRO BEFORE AND AFTER TREATMENT WITH ACTINOMYCIN D.
AUTHOR(S): WAGNER H N JR [Reprint author]; HENDRIX M J C
CORPORATE SOURCE: DEP ANATOMY, COLL MED, UNIV ARIZ, TUCSON, ARIZ 85724, USA
SOURCE: Cell Differentiation, (1985) Vol. 16, No. SUPPL,

pp. 138S.
Meeting Info.: 10TH INTERNATIONAL CONGRESS OF THE INTERNATIONAL SOCIETY OF DEVELOPMENTAL BIOLOGISTS ON NEW DISCOVERIES AND TECHNOLOGIES, LOS ANGELES, CALIF., USA, AUG. 4-9, 1985. CELL DIFFER.
CODEN: CLDFAT. ISSN: 0045-6039.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 25 Apr 1986
Last Updated on STN: 25 Apr 1986

L18 ANSWER 10 OF 10 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 85100656 MEDLINE
DOCUMENT NUMBER: PubMed ID: 6240392
TITLE: The regulation of basement membrane formation and cell-matrix interactions by defined supramolecular complexes.
AUTHOR: Martin G R; Kleinman H K; Terranova V P; Ledbetter S; Hassell J R
SOURCE: Ciba Foundation symposium, (1984) Vol. 108, pp. 197-212. Ref: 3
Journal code: 0356636. ISSN: 0300-5208.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198503
ENTRY DATE: Entered STN: 20 Mar 1990
Last Updated on STN: 20 Mar 1990
Entered Medline: 11 Mar 1985

AB Several constituents of basement membranes, including type IV collagen, laminin, heparan sulphate proteoglycan and nidogen, form a defined supramolecular complex that is an obligatory intermediate in the formation of this matrix. We have named this defined supramolecular complex the 'basement membrane matrisome'. Matrisome structures composed of other collagens, proteoglycans and glycoproteins may participate in the formation of other extracellular matrices. Cells show specific interactions with components of the extracellular matrix. We discuss studies that indicate that melanoma cells can express receptors for both laminin and fibronectin. However, these receptors are expressed in a reciprocal fashion, depending on the exposure of the cell to these proteins. Binding of either fibronectin or laminin to the cells elicits a distinct phenotype. This represents a mechanism in which cellular activity can be regulated by extracellular matrix factors during development and in repair.

=> d history

(FILE 'HOME' ENTERED AT 11:42:16 ON 28 APR 2006)

FILE 'MEDLINE, BIOSIS, LIFESCI, BIOTECHDS, SCISEARCH, HCAPLUS' ENTERED AT 11:42:31 ON 28 APR 2006
L1 16973 S (GUO, Y?)/AU
L2 18064 S (MA, J?)/AU
L3 34555 S L1 OR L2
L4 54154 S MELANOCYTIC OR MELANOCYTE#
L5 17 S L3 AND L4
L6 10 DUP REM L5 (7 DUPLICATES REMOVED)

```
     FILE 'STNGUIDE' ENTERED AT 11:47:07 ON 28 APR 2006
L7            0 S FIBRONECTIN# OR (OPSONIC(4W)GLYCOPROTEIN#)

     FILE 'MEDLINE, BIOSIS, LIFESCI, BIOTECHDS, SCISEARCH, HCAPLUS' ENTERED AT
     12:03:27 ON 28 APR 2006
L8       113501 S FIBRONECTIN# OR (OPSONIC(4W)GLYCOPROTEIN#)
L9          579 S L8(5A)VARIANT#
L10          13 S MELANOMA(S)L9
L11           6 S L10 AND PY<2000
L12           2 DUP REM L11 (4 DUPLICATES REMOVED)
L13         328 S MELANOMA#(3A)FIBRONECTIN#
L14         238 S L13 AND PY<2000
L15       24321 S MELANOMA#(3A)(EXPRESS? OR UPREGULAT? OR ASSOCIAT? OR SPECIFIC
L16          32 S L15(5A)FIBRONECTIN#
L17          19 S L16 AND PY<2000
L18          10 DUP REM L17 (9 DUPLICATES REMOVED)

=> s fibronectin#(3a)(express? or upregulat? or associat? or specific)
L19      11635 FIBRONECTIN#(3A)(EXPRESS? OR UPREGULAT? OR ASSOCIAT? OR SPECIFIC
               )

=> s fibronectin(3a)(isoform# or variant#)
L20       1248 FIBRONECTIN(3A)(ISOFORM# OR VARIANT#)

=> s l19 or l20
L21      12422 L19 OR L20

=> s melanoma#(s)l21
L22          84 MELANOMA#(S) L21

=> s l22 and py<2000
   1 FILES SEARCHED...
L23          44 L22 AND PY<2000

=> dup rem l23
PROCESSING COMPLETED FOR L23
L24          24 DUP REM L23 (20 DUPLICATES REMOVED)

=> d ibib abs tot

L24  ANSWER 1 OF 24  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        1999:516040  HCAPLUS
DOCUMENT NUMBER:         131:183190
TITLE:                   Expression and localization of talin relate to cell
                         motility of human melanoma cells
AUTHOR(S):               Nakamura, Hiroaki
CORPORATE SOURCE:        Sch. Med., Iwate Med. Univ., Morioka, 020-8505, Japan
SOURCE:                  Iwate Igaku Zasshi (1999), 51(1), 35-42
                         CODEN: IIZAAX; ISSN: 0021-3284
PUBLISHER:               Iwate Igakkai
DOCUMENT TYPE:           Journal
LANGUAGE:                Japanese
AB   Among several components of cellular focal adhesion plaques, talin is
     believed to transmit signals of integrins to cytoskeletal proteins in
     fibroblasts and platelets.  We studied talin expression, distribution, and
     its relation to cell migration in melanoma cell lines.  Melanoma cells
     cultured on fibronectin coated cover-slips show talin containing plaques,
     which are distributed in the periphery of cells and localized to actin
     stress fiber termination sites, using double immunofluorescence staining.
     There is heterogeneous expression and distribution of talin in melanoma
     cell lines.  However, two groups can be identified; one with higher mean
     talin plaques/cell compared to the other group.  The group with the higher
```

number of talin plaques/cell exhibited significantly higher mean migration rates in time-lapse image anal. compared to the group with lower nos. of talin plaques/cell. These results indicate that melanoma cells show heterogeneous expression of talin and the functional relation of talin expression to a high migration on fibronectin with suggests that this tyrosine kinase protein modulates cytoskeletal function in malignant melanomas.

L24 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:674367 HCAPLUS
DOCUMENT NUMBER: 130:79482
TITLE: Positive association between cytoskeletal changes, melanoma cell attachment and invasion in vitro
AUTHOR(S): Dewhurst, L. O.; Rennie, G.; MacNeil, S.
CORPORATE SOURCE: University of Sheffield Department of Medicine, Clinical Sciences Centre, Northern General Hospital, Sheffield, S5 7AU, UK
SOURCE: Melanoma Research (1998), 8(4), 303-311
CODEN: MREEEH; ISSN: 0960-8931
PUBLISHER: Lippincott-Raven Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The literature concerning cytoskeletal changes and metastatic progression is unresolved, some studies suggesting a pos. association between the ability of cells to organize their cytoskeleton and others suggesting an inverse correlation. To learn more about cytoskeletal changes and the ability of melanoma cells to interact with extracellular matrix proteins the authors examined the of pharmacol. manipulation of cell attachment and cell invasion through fibronectin on levels of F-actin and vimentin in a highly metastatic cutaneous melanoma cell line (A375-SM cells). Addnl., the authors examined whether any correlation existed between the levels of the cytoskeletal proteins and subpopulations of the cell line of varying invasive ability. The authors report that agents which reduced cell attachment to plastic and invasion through fibronectin in vitro (tamoxifen, N-desmethyltamoxifen and 17β-estradiol) caused increases in levels of F-actin and vimentin, whereas agents which did not affect attachment or invasion (4-hydroxytamoxifen and dihydrotestosterone) had little or no effect on the cytoskeletal proteins. In contrast, however, those cells which were most effective at invading through fibronectin were significantly better at acutely increasing their levels of F-actin and vimentin than less invasive cells. The authors speculate that the ability to rapidly and possibly reversibly alter the cytoskeleton might be associated with metastatically successful cells in vivo.
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 3 OF 24 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:457759 BIOSIS
DOCUMENT NUMBER: PREV199800457759
TITLE: A melanoma associated fibronectin variant characterized by monoclonal antibody SM5-1.
AUTHOR(S): Chen, Y.; Guo, Y. J.; Herberth, G.; Adrian, K.; Siegel, P.; Audring, H.; Hansen-Hagge, T.; Sterry, W.; Trefzer, U.
CORPORATE SOURCE: Dep. Dermatol., Charite, Humboldt Univ., 10115 Berlin, Germany
SOURCE: Journal of Molecular Medicine (Berlin), (May, 1998) Vol. 76, No. 6, pp. B11. print.
Meeting Info.: 2nd Congress of Molecular Medicine. Berlin, Germany. May 6-9, 1998.
ISSN: 0946-2716.
DOCUMENT TYPE: Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 30 Oct 1998
Last Updated on STN: 30 Oct 1998

L24 ANSWER 4 OF 24 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 96183755 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8608953
TITLE: Interaction with fibronectin regulates cytokine gene expression in human melanoma cells.
AUTHOR: Lupetti R; Mortarini R; Panceri P; Sensi M; Anichini A
CORPORATE SOURCE: Division of Experimental Oncology D, Istituto Nazionale Tumori, Milan, Italy.
SOURCE: International journal of cancer. Journal international du cancer, (1996 Mar 28) Vol. 66, No. 1, pp. 110-6.
Journal code: 0042124. ISSN: 0020-7136.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199605
ENTRY DATE: Entered STN: 5 Jun 1996
Last Updated on STN: 5 Jun 1996
Entered Medline: 29 May 1996

AB Our study was aimed at investigating whether interaction of human melanoma cells with the extracellular matrix (ECM) protein fibronectin (FN) could regulate lymphokine gene expression. Serum-deprived cells (quiescent condition) of a metastatic melanoma cloned line were cultured either on uncoated or on FN- or BSA-coated surfaces. By means of reverse transcriptase- polymerase chain reaction (RT-PCR), we analyzed mRNA expression of 4 cytokines interleukin (IL)-1alpha, IL, 1beta, IL-6 and IL-8-and 9 growth factors-endothelial cell growth factor (ECGF), basic fibroblast growth factor (bFGF), fibroblast growth factor (FGF)-5, HST, keratinocyte growth factor (KGF), transforming growth factor (TGF)-alpha TGF-beta1, TGF-beta2 and TGF-beta3. When cultured on FN, melanoma cells expressed IL-1beta and IL-6 transcripts in addition to IL-1beta, IL-8, ECGF, TGF-beta1, TGF-beta2 and TGF-beta3, already present in quiescent cells. Amplification parameters to achieve semi-quantitative RT-PCR were then determined for each detectable factor, thus allowing us to measure a selective enhancement of mRNA levels for IL-1alpha, IL-6, IL-8 and TGF-beta2 upon interaction with FN by quiescent melanoma cells. This augmented expression was inhibited by an anti-integrin beta1 chain monoclonal antibody (MAb). Moreover, the amounts of IL-6, IL-8 and IL-beta produced in the supernatants, as assessed by ELISA, correlated with the corresponding mRNA expression. Extension of this analysis to the other 5 human primary and metastatic melanoma lines confirmed the ability of FN to selectively up-regulate only IL-6 and IL-8 secretion. Our data indicate that FN is able to modulate expression and secretion of a defined subset of lymphokines in human melanoma.

L24 ANSWER 5 OF 24 LIFESCI COPYRIGHT 2006 CSA on STN DUPLICATE 2
ACCESSION NUMBER: 97:48963 LIFESCI
TITLE: Inhibition of cellular chemotactic invasion by a vinca alkaloid, conophylline
AUTHOR: Amino, N.; Ohse, T.; Koyano, T.; Umezawa, K.*
CORPORATE SOURCE: Department of Applied Chemistry, Faculty of Science and Technology, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama223, Japan
SOURCE: ANTICANCER RES., (1996) vol. 16, no. 1, pp. 55-60
.
ISSN: 0250-7005.

DOCUMENT TYPE: Journal
FILE SEGMENT: R
LANGUAGE: English
SUMMARY LANGUAGE: English
AB K-ras-NIH3T3 cells were more invasive than NIH3T3 cells in a chemotactic invasion assay. Conophylline, a new vinca alkaloid isolated as a ras function inhibitor, inhibited the invasion of K-ras-NIH3T3 cells, while it showed no effect on NIH3T3 cells. Conophylline did not increase expression of fibronectin but induced E-cadherin expression in K-ras-NIH3T3 cells. Mouse melanoma B16/F10 is a highly metastatic cell line. Conophylline was found to induce flat morphology in B16/F10 cells and it again inhibited the invasion of the cells to the matrigel membrane. It induced fibronectin expression but not E-cadherin expression in B 16/F10 cells. Thus, conophylline lowered invasiveness of K-ras-NIH3T3 and B 16/F10 cells by reversing neoplastic phenotypes.

L24 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1996:102171 HCAPLUS
DOCUMENT NUMBER: 124:168000
TITLE: The expression of integrin α2β1 and attachment to type I collagen of melanoma cells are preferentially induced by tumor promoter, TPA (12-O-tetradecanoyl phorbol-13-acetate)
AUTHOR(S): Eguchi, H.; Horikoshi, T.
CORPORATE SOURCE: Dep. Dermatology, Sapporo Medical Univ., Sapporo, 060, Japan
SOURCE: British Journal of Dermatology (1996), 134(1), 33-9
CODEN: BJDEAZ; ISSN: 0007-0963
PUBLISHER: Blackwell
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The adhesion of melanoma cells to the extracellular matrix (ECM) protein is likely to be essential in their invasive metastatic processes. Treatment with 12-O-tetradecanoyl phorbol-13-acetate (TPA), a potent protein kinase C (PKC) activator, preferentially induced the expression of α2β1 integrin, the receptor for collagen/laminin. The number of cells attached to type I collagen, but not laminin, was increased by treatment with TPA. Prior exposure to PKC inhibitors such as H-7 (20 μmol/L) and calphostin C (50 μmol/L) had no effect on TPA-induced α2β1 integrin expression and cell attachment to type I collagen, whereas prior exposure to the calmodulin antagonist W-7 (50 μmol/L) inhibited these TPA-induced events. The augmented adhesion was also inhibited by anti-α2 antibody. These data suggest that the increased attachment of melanoma cells to type I collagen appears to be mediated by the preferential augmentation of integrin α2β1, and the activation of calmodulin kinase, but not via the activation of PKC. Anal. of the expression of integrins and of cell attachment to ECMs is important in elucidating the mechanisms involved in the progression and metastasis of malignant melanoma.

L24 ANSWER 7 OF 24 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 95:117853 LIFESCI
TITLE: Spreading and focal contact formation of human melanoma cells in response to the stimulation of both melanoma-associated proteoglycan (NG2) and alpha 4 beta 1 integrin
AUTHOR: Iida, J.; Meijne, A.M.L.; Spiro, R.C.; Roos, E.; Furcht, L.T.; McCarthy, J.B.
CORPORATE SOURCE: Dep. Lab. Med. and Pathol., Univ. Minnesota, Box 609 UMHC, 420 Delaware St., SE Minneapolis, MN 55455, USA

SOURCE: CANCER RES., (1995) vol. 55, no. 10, pp. 2177-2185.
DOCUMENT TYPE: Journal
FILE SEGMENT: B
LANGUAGE: English
SUMMARY LANGUAGE: English
AB In this study, we evaluated the potential role for a specific melanoma-associated chondroitin sulfate proteoglycan core protein, termed NG2, to collaborate with alpha 4 beta 1 integrin in focal contact formation in human melanoma cells. Although melanoma cells adhered to substrata coated with either the alpha 4 beta 1 integrin binding fibronectin synthetic peptide CS1-OVA or anti-NG2 mAbs, no spreading or focal contact formation was observed on either substratum. However, melanoma cells spread and formed focal contacts on "chimeric substrata" coated with CS1-OVA and the anti-NG2 mAb, 9.2.27, indicating that engaging both adhesion receptors changes the adhesion phenotype of melanoma cells by reorganizing the cytoskeleton. The collaboration between the two receptors is specific to fibronectin, since cells adherent on substrata coated with low concentrations of either laminin and 9.2.27 or type IV collagen and 9.2.27 failed to spread, while cells adherent on low concentration of fibronectin and 9.2.27 exhibited a fully spread morphology. Two selective tyrosine kinase inhibitors, genistein and herbimycin A, totally inhibited cell spreading on the substrata coated with CS1-OVA and 9.2.27, indicating that tyrosine kinase(s) is important for cell spreading and focal contact formation. When cells were cultured on substrata coated with CS1-OVA and 9.2.27, two proteins (M sub(r) 130,000 and 120,000) were tyrosine phosphorylated in a genistein- and herbimycin A-sensitive fashion. These proteins were not immunologically related to pp125 super(FAK) or alpha 4 beta 1 integrin. Importantly, when melanoma cells were cultured on substrata coated with CS1 and then stimulated with 9.2.27-conjugated microsphere beads, formation of focal contacts and stress fibers was also observed, indicating that NG2 can collaborate with alpha 4 beta 1 integrin when each receptor is engaged on distinct and separate substrata. These results demonstrate that NG2 acts as a coreceptor for spreading and focal contact formation in association with alpha 4 beta 1 integrin in melanoma cells and suggest a model in which the NG2 core protein communicates to alpha 4 beta 1 integrin by an inside-out signaling mechanism.

L24 ANSWER 8 OF 24 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 95:109243 LIFESCI
TITLE: Expression of fibronectin, fibronectin isoforms and integrin receptors in melanocytic lesions
AUTHOR: Natali, P.G.; Nicotra, M.R.; Di Filippo, F.; Bigotti, A.
CORPORATE SOURCE: Regina Elena Cancer Inst., Via Messi D'Oro 156, 00158 Roma, Italy
SOURCE: BR. J. CANCER, (1995) vol. 71, no. 6, pp. 1243-1247.
DOCUMENT TYPE: Journal
FILE SEGMENT: N
LANGUAGE: English
SUMMARY LANGUAGE: English
AB In vitro studies have demonstrated that fibronectin (FN) can deliver a mitogenic signal to quiescent human melanoma cells and that the alpha sub(5)/ beta sub(1)-integrin receptor mediates this stimulus. In view of this finding we have analysed the in vivo expression of FN, and of ED-A and ED-B FN isoforms, in benign and malignant lesions of melanocyte origin. In the same specimens the expression of fibronectin integrin receptors was evaluated. The results demonstrate that, while detection of FN does not correlate with transformation and tumour progression, the expression of the two isoforms

is associated with transformation and that only the ED-A variant is found in metastases. Integrin phenotyping disclosed that alpha sub(3)/ beta sub(1) expression is associated with tumour progression, alpha sub(v)/ beta sub(3) is a marker of transformation, alpha sub(4) is rarely expressed and alpha sub(5) is expressed by about 50% and 30% of the primary and metastatic lesions respectively. Taken together, the results of this study demonstrate that transformation and tumour progression of the melanocyte lineage are associated with modulation of expression of FN isoforms and FN integrin receptors. Furthermore, the expression of alpha sub(5)-integrin in a considerable percentage of primary and metastatic lesions indicates that FN may deliver a proliferative stimulus to melanoma cells in vivo.

L24 ANSWER 9 OF 24 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 3

ACCESSION NUMBER: 1995:496064 BIOSIS
DOCUMENT NUMBER: PREV199598519614
TITLE: Reversible and terminal differentiation in human melanoma cells enhances fibronectin and integrin gene expression.
AUTHOR(S): Su, Zao-Zhong; Jiang, Hongping; Waxman, Samuel; Goldstein, Neil I.; Fisher, Paul B. [Reprint author]
CORPORATE SOURCE: Dep. Pathol. Urol., Columbia Univ., Coll. Physician Surgeons, PH STEM-10, 630 West 168th St., New York, NY 10032, USA
SOURCE: Molecular and Cellular Differentiation, (1995) Vol. 3, No. 3, pp. 225-239. ISSN: 1065-3074.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 29 Nov 1995
Last Updated on STN: 29 Nov 1995

AB Cancer cells often display abnormalities in morphology and adhesion properties, including modifications in integrins that are major receptors mediating attachment to the extracellular matrix. Treatment of H0-1 human melanoma cells with the antileukemic compound mezerein (MEZ), which induces reversible differentiation, or MEZ plus recombinant human fibroblast interferon (IFN-beta), which results in terminal differentiation, induces growth suppression and a reversion to a melanocyte-like morphology (8,9). Reversible and terminal differentiation in HO-1 cells results in increased fibronectin, alpha-1 integrin, and beta-1 integrin expression (9). In the present study we analyzed the mechanism underlying these gene expression changes in H0-1 human melanoma cells. Nuclear run-on assays indicate that MEZ and IFN-beta + MEZ increase the transcription rates of fibronectin, alpha-5 integrin, and beta-1 integrin. In contrast, no significant change in the transcription of E-cadherin, P-cadherin, tenascin, gamma-actin, beta-actin, or tropomyosin-1 genes occur under similar conditions. Elevated levels of fibronectin, alpha-5 integrin, and beta-1 integrin mRNA are apparent by 12 h of treatment with MEZ and IFN-beta + MEZ, and enhanced expression, at both an mRNA and protein level, persists in reversibly differentiated and terminally differentiated H0-1 cells. The elevation in fibronectin gene expression in IFN-beta + MEZ-treated H0-1 cells occurs in the presence of cycloheximide, suggesting that this gene expression change is not dependent on ongoing protein synthesis. Enhanced fibronectin, alpha-5 integrin, and beta-1 integrin expression in IFN-beta + MEZ-treated H0-1 cells does not involve an alteration in the stability of the respective mRNAs. These results indicate that induction of reversible differentiation (MEZ) and terminal differentiation (IFN-beta + MEZ) in H0-1 cells results in elevated fibronectin, alpha-5 integrin, and beta-1 integrin expression that is mediated primarily by elevated rates of RNA transcription.

L24 ANSWER 10 OF 24 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 96089294 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8585604
TITLE: Scintillation proximity assay to measure binding of soluble fibronectin to antibody-captured alpha 5 beta 1 integrin.
AUTHOR: Pachter J A; Zhang R; Mayer-Ezell R
CORPORATE SOURCE: Department of Molecular Pharmacology, Schering-Plough Research Institute, Kenilworth, New Jersey 07033-0539, USA.
SOURCE: Analytical biochemistry, (1995 Sep 1) Vol. 230, No. 1, pp. 101-7.
Journal code: 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199603
ENTRY DATE: Entered STN: 27 Mar 1996
Last Updated on STN: 27 Mar 1996
Entered Medline: 21 Mar 1996

AB A scintillation proximity assay (SPA) has been developed to measure binding of alpha 5 beta 1 integrin, a heterodimeric cell-surface adhesion receptor, to fibronectin. This assay utilizes an anti-beta 1 integrin monoclonal antibody to simultaneously capture alpha 5 beta 1 from a cellular lysate and couple the integrin to anti-mouse IgG antibody-coated SPA beads for detection of 125I-fibronectin binding. The assay does not require prior purification of alpha 5 beta 1 nor physical separation of bound and free 125I-fibronectin. Chinese hamster ovary cells that stably overexpress human alpha 5 integrin (CHO#7 cells) were used as a source of alpha 5 beta 1 fibronectin receptor. Using the anti-hamster beta 1 monoclonal antibody 7E2 to capture alpha 5 beta 1 from a CHO#7 cell lysate, this SPA assay allowed measurement of specific 125I-fibronectin binding as defined by displacement by the Arg-Gly-Asp containing peptide GRGDSP or the anti-human alpha 5 antibody P1D6. IC50 values for displacement of 125I-fibronectin binding by GRGDSP and the novel cyclic peptides cRGDGF, cRGEGF, and cRRETAWA were 2.6, 0.045, 3.2, and 37 microM, respectively. Specific 125I-fibronectin binding to alpha 5 beta 1 from C8161 human melanoma cells was also measured using anti-human beta 1 antibodies. This method should be generally useful to measure cell-free ligand binding to receptors that are difficult to purify.

L24 ANSWER 11 OF 24 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 95050453 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7525548
TITLE: Integrin alpha 4 beta 1-mediated melanoma cell adhesion and migration on vascular cell adhesion molecule-1 (VCAM-1) and the alternatively spliced IIICS region of fibronectin.
AUTHOR: Mould A P; Askari J A; Craig S E; Garratt A N; Clements J; Humphries M J
CORPORATE SOURCE: School of Biological Sciences, University of Manchester, United Kingdom.
SOURCE: The Journal of biological chemistry, (1994 Nov 4) Vol. 269, No. 44, pp. 27224-30.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199411
ENTRY DATE: Entered STN: 10 Jan 1995
Last Updated on STN: 3 Feb 1997

Entered Medline: 29 Nov 1994

AB The integrin receptor alpha 4 beta 1 (also known as VLA-4) binds two different ligands, the endothelial cell surface protein vascular cell adhesion molecule-1 (VCAM-1) and the extracellular matrix component fibronectin. Three distinct sites in fibronectin are recognized by alpha 4 beta 1. Two of these (represented by peptides CS1 and CS5) are present in the alternatively spliced IIICS region and lie in separate, independently spliced segments of this region. A third site resides in the adjacent constitutively expressed HepII domain. Recombinant proteins containing the HepII domain and different splice variants of the IIICS have been generated and compared for their ability to mediate cell attachment, spreading and migration. The activity of these proteins has also been compared with that of a recombinant soluble form of VCAM-1 (rsVCAM-1). All the recombinant proteins supported A375-SM human melanoma cell attachment and spreading in an alpha 4 beta 1-dependent manner, but had varied adhesive activities with rsVCAM-1 > fibronectin variants containing the CS1 sequence >> other fibronectin variants. Low concentrations of rsVCAM-1 and CS1-containing fibronectin variants effectively supported cell migration in a trans-filter assay; however, cell motility was retarded at high concentrations of the same proteins. Fibronectin variants lacking CS1 supported little or no migration. To obtain further insight into the molecular basis of this varied adhesive activity, apparent dissociation constants for each of the recombinant proteins were measured using a solid phase receptor-ligand binding assay. The results revealed a hierarchy of ligand affinities that mirrored their adhesive activity (rsVCAM-1 > fibronectin variants containing CS1 >> other fibronectin variants).

L24 ANSWER 12 OF 24 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1995:98272 BIOSIS
DOCUMENT NUMBER: PREV199598112572
TITLE: Expression and activity of fibronectin receptors in human melanoma cells.
AUTHOR(S): Van Muijen, G.; Danen, E.; Jansen, C.; Ruiter, D.
CORPORATE SOURCE: Dep. Pathol., Univ. Hosp. Nijmegen, Nijmegen, Netherlands
SOURCE: Clinical and Experimental Metastasis, (1994) Vol. 12, No. 5, pp. 44.
Meeting Info.: Fifth International Congress of the Metastasis Research Society. Bethesda, Maryland, USA. September 28-October 1, 1994.
CODEN: CEXMD2. ISSN: 0262-0898.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 1 Mar 1995
Last Updated on STN: 1 Mar 1995

L24 ANSWER 13 OF 24 MEDLINE on STN DUPLICATE 6

ACCESSION NUMBER: 93239384 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8478149
TITLE: Integrin expression in cutaneous malignant melanoma: association of the alpha 3/beta 1 heterodimer with tumor progression.
AUTHOR: Natali P G; Nicotra M R; Bartolazzi A; Cavaliere R; Bigotti A
CORPORATE SOURCE: Regina Elena Cancer Institute, Rome, Italy.
SOURCE: International journal of cancer. Journal international du cancer, (1993 Apr 22) Vol. 54, No. 1, pp. 68-72.
Journal code: 0042124. ISSN: 0020-7136.
PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199305
ENTRY DATE: Entered STN: 11 Jun 1993
Last Updated on STN: 3 Feb 1997
Entered Medline: 25 May 1993

AB The cell-surface heterodimers of the integrin family of molecules, which mediate cell-cell and cell-substratum interactions, are likely to be functionally relevant in local and metastatic tumor growth. In the present study we have analyzed whether the alpha 3/beta 1 receptor for collagen, laminin and fibronectin undergoes changes in expression during tumor progression in cutaneous malignant melanoma (CMM). The results of this study have demonstrated that, while low levels of VLA3 expression are detectable in benign lesions, in primary melanomas the heterodimer undergoes progressive increase in expression which correlates with the degree of dermal invasiveness. Metastatic lesions were found VLA3 positive in 82% of cases. Furthermore, the heterodimer is homogeneously expressed in multiple autologous metastases. The presence of VLA3 correlates with detection of at least one of the ligands in 45% of the cases studied. These findings provide additional evidence that tumor progression in CMM is associated with changes in integrin phenotypes which include the alpha 3/beta 1 heterodimer.

L24 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1994:213970 HCAPLUS
DOCUMENT NUMBER: 120:213970
TITLE: Gene expression changes induced in human melanoma cells undergoing reversible growth suppression and terminal cell differentiation
AUTHOR(S): Jiang, Hongping; Su, Zaozhong; Boyd, Jeff; Fisher, Paul B.
CORPORATE SOURCE: Columbia Univ. Coll. Physicians Surg., New York, NY, 10032, USA
SOURCE: Molecular and Cellular Differentiation (1993), 1(1), 41-66
CODEN: MCDIEL; ISSN: 1065-3074
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The combination of recombinant human fibroblast interferon (IFN-β) and the antileukemic compound mezerein (MEZ) results in the induction of terminal cell differentiation in the human melanoma cell line H0-1. This process is associated with an increase in melanin synthesis, profound morphol. changes, a modification in cell surface antigen expression, and an irreversible loss in proliferative ability. With the exception of loss of proliferative capacity (i.e., terminal cell differentiation), many of the differentiation-associated changes observed in H0-1 cells treated with IFN-β + MEZ are also apparent in H0-1 cells treated with equivalent doses of either agent alone or treated with mycophenolic acid (MPA), trans-retinoic acid (RA), or recombinant immune interferon (IFN-γ). The present study was conducted to ascertain which changes in gene expression are directly linked to reversible cell growth arrest (with and without reversible changes in the expression of differentiation-associated traits) vs. the induction of terminal cell differentiation in human melanoma cells. Treatments inducing reversible cell growth arrest or terminal cell differentiation resulted in the induction or enhanced expression of c-jun, jun-B, HLA Class I antigen, melanoma growth stimulatory activity (gro/MGSA), fibronectin, α5 integrin, β1 integrin, interferon-stimulated gene-15 (ISG-15) and ISG-54. In contrast, c-myc and tenascin expression were downregulated during IFN-β + MEZ treatment, whereas a similar degree of reversible growth suppression

induced by IFN-β + IFN-γ resulted in increased c-myc and tenascin expression. Conditioned medium from cells treated with IFN-β + MEZ also induced a number of similar gene expression changes in H0-1 cells as those resulting from direct exposure to this combination of inducers. These results indicate that the induction of reversible growth suppression and terminal cell differentiation in human melanoma cells is associated with both similar and distinct patterns of changes in the expression of early growth response, extracellular matrix, extracellular matrix receptor, and interferon-responsive genes. A potential role of autocrine factors produced by differentiating melanoma cells in modulating gene expression during the induction of terminal differentiation of H0-1 cells is also demonstrated.

L24 ANSWER 15 OF 24 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1993:17601 BIOSIS
DOCUMENT NUMBER: PREV199344005801
TITLE: Low dose radiation stimulates B16 melanoma cell alpha-LLb-beta-3 integrin receptor expression and adhesion to fibronectin in vitro and metastasis in vivo.
AUTHOR(S): Onoda, J. M.; Kantak, S. S.; Piechocki, M. P.; Awad, W.; Chea, R.; Monterosso, D. D.; Liu, B.; Mamytbekova, A. Z.
CORPORATE SOURCE: Dep. Radiation Oncol., Wayne State Univ. Sch. Med., Detroit, Mich. 48202, USA
SOURCE: Molecular Biology of the Cell, (1992) Vol. 3, No. SUPPL., pp. 19A.
Meeting Info.: Thirty-second Annual Meeting of the American Society for Cell Biology, Denver, Colorado, USA, November 15-19, 1992. MOL BIOL CELL.
CODEN: MBCEEV. ISSN: 1059-1524.
DOCUMENT TYPE: Conference; (Meeting)
LANGUAGE: English
ENTRY DATE: Entered STN: 16 Dec 1992
Last Updated on STN: 10 Feb 1993

L24 ANSWER 16 OF 24 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

ACCESSION NUMBER: 1992:592036 SCISEARCH
THE GENUINE ARTICLE: JR255
TITLE: LOW-DOSE RADIATION STIMULATES B16 MELANOMA CELL ALPHA-LLB-BETA-3 INTEGRIN RECEPTOR EXPRESSION AND ADHESION TO FIBRONECTIN INVITRO AND METASTASIS INVIVO
AUTHOR: ONODA J M (Reprint); KANTAK S S; PIECHOCK M P; AWAD W; CHEA R; MONTEROSSO D D; LIU B; MAMYTBEKOVA A Z
CORPORATE SOURCE: WAYNE STATE UNIV, SCH MED, DEPT RADIAT ONCOL, DETROIT, MI 48202
COUNTRY OF AUTHOR: USA
SOURCE: MOLECULAR BIOLOGY OF THE CELL, (SEP 1992) Vol. 3, Supp. [S], pp. A19-A19.
ISSN: 1059-1524.
PUBLISHER: AMER SOC CELL BIOLOGY, PUBL OFFICE, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 0
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994

L24 ANSWER 17 OF 24 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN

ACCESSION NUMBER: 1992-04457 BIOTECHDS
TITLE: New artificial functional polypeptide for inhibiting cancer metastasis;
human recombinant fibronectin cell adhesion domain-melanoma adhesion active site fusion protein production; plasmid pCS25 expression in Escherichia coli; pot. antimetastatic
PATENT ASSIGNEE: Takara-Shuzo
PATENT INFO: JP 03284700 16 Dec 1991
APPLICATION INFO: JP 1990-80676 30 Mar 1990
PRIORITY INFO: JP 1990-80676 30 Mar 1990
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
OTHER SOURCE: WPI: 1992-037731 [05]
AN 1992-04457 BIOTECHDS
AB The following are new: i. a recombinant functional protein in which a human fibronectin cell adhesion domain peptide and a melanoma adhesion active site are bonded directly or indirectly; ii. an inhibitor of cancer metastasis which contains the protein; and iii. an inhibitor of cancer metastasis which contains the functional protein of human fibronectin adhesion active site specific for melanoma cells. In an example, a CS1 peptide composed of 25 amino acids was chemically synthesized. Plasmid pCS25 was constructed which expressed the human fibronectin cell adhesion domain Pro1239-Ser1515 (277 amino acids)-CS1 fusion protein in Escherichia coli HB101. E. coli HB101/pCS25 was deposited as FERM P-11339. By culturing the transformant, the fusion protein was produced and purified. C57BL/6 and B16-BL6 melanoma cells were used to test the cancer metastasis inhibiting activity of the fusion protein. (8pp)

L24 ANSWER 18 OF 24 BIOTECHDS COPYRIGHT 2006 THE THOMSON CORP. on STN
ACCESSION NUMBER: 1991-11037 BIOTECHDS
TITLE: Production and characterization of functional domains of human fibronectin expressed in Escherichia coli;
cell adhesion activity; possible application in inhibition of cancer metastasis
AUTHOR: Kimizuka F; Taguchi Y; Ohdate Y; Kawase Y; Shimojo T; Hashino K
CORPORATE SOURCE: Takara-Shuzo
LOCATION: Biotechnology Research Laboratories, Takara Shuzo Co., Ltd., 3-4-1 Seta, Otsu, Shiga 520-21, Japan.
SOURCE: J.Biochem.; (1991) 110, 2, 284-91
CODEN: JOBIAO
DOCUMENT TYPE: Journal
LANGUAGE: English
AN 1991-11037 BIOTECHDS
AB Recombinant plasmids were constructed that expressed the human fibronectin cell-binding domain (CBD), the heparin-binding domain (HBD), or both, with or without the CS1 sequence of the IIICS region, in Escherichia coli HB101. Deletion analysis of the type III repeats showed that the HBD was at type III-13. The cell-adhesive activity of a fusion protein, CH-271, containing the CBD and HBD was twice that of C-274 when tested on BHK cells; H-271 alone was inactive. Recombinant proteins containing the CS1 sequence were more active than C-274 and CH-271 when tested on B16-F10 melanoma cells. H-296, which contained H-271 and CS1, was almost inactive with BHK cells. CH-296, which contained CS1 at the C-terminus of CH-271, was more active with B16-F10 than H-296 and C-CS1, which was produced by deletion of H-271 from CH-296. Thus, the CBD was active with both kinds of cells. The HBD promoted adhesion of both kinds of cells only when linked to the CBD or CS1. CS1 was specific for the adhesion of B16-F10 but was not essential. The products are

being examined for their ability to inhibit cancer metastasis. (39 ref)

L24 ANSWER 19 OF 24 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1991:457027 BIOSIS
DOCUMENT NUMBER: PREV199192101807; BA92:101807
TITLE: IMMUNOHISTOCHEMICAL DIFFERENTIAL DIAGNOSIS OF 60 CASES OF RHABDOMYOSARCOMA.
AUTHOR(S): LI X-M [Reprint author]; ET AL
CORPORATE SOURCE: ANHUI PROVINCIAL HOSP, HEFEI, ANHUI
SOURCE: Zhonghua Zhongliu Zazhi, (1991) Vol. 13, No. 3, pp. 207-209.
CODEN: CHHCDF. ISSN: 0253-3758.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: CHINESE
ENTRY DATE: Entered STN: 11 Oct 1991
Last Updated on STN: 11 Oct 1991
AB Using the avidin-biotin complex immunoperoxidase technique and antibodies to myoglobin, desmin, CLA, NSE, GFAP, keratin, fibronectin, α1AT, lysozyme, S-100 protein, vimentin, cytokeratin, actin, the authors studied 60 cases of rhabdomyosarcoma (RMS) histopathologically diagnosed previously. Thirty-six cases showed both myoglobin and desmin positive stain, an objective evidence of the origin from skeletal muscles. The other 24 cases were identified as of non-skeletal muscle origin, including MFH, lymphoma, melanoma, neuroblastoma, malignant neurilemmoma, leiomyosarcoma etc. This study strongly suggests that histologic examination of RMS may lead to incorrect diagnosis. Histologically MFH and other types of spindle cell sarcomas invading normal skeletal muscles may be confused with pleomorphic RMS, lymphoma and neuroblastoma may be confused with embryonic RMS. Our findings indicate that myoglobin is a highly sensitive and specific tumor marker for RMS.

L24 ANSWER 20 OF 24 LIFESCI COPYRIGHT 2006 CSA on STN
ACCESSION NUMBER: 90:20989 LIFESCI
TITLE: Affinity chromatographic isolation of the melanoma adhesion receptor for the IIICS region of fibronectin and its identification as the integrin alpha sub(4) beta sub(1).
AUTHOR: Mould, A.P.; Wheldon, L.A.; Komoriya, A.; Wayner, E.A.; Yamada, K.M.; Humphries, M.J.
CORPORATE SOURCE: Dep. Biochem. and Mol. Biol., Univ. Manchester Med. Sch., Manchester M13 9PT, UK
SOURCE: J. BIOL. CHEM., (1990) vol. 265, no. 7, pp. 4020-4024.
DOCUMENT TYPE: Journal
FILE SEGMENT: M
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Eukaryotic cells adhere to at least two different regions of the fibronectin molecule: a central domain present in all fibronectin isoforms, and the type III connecting segment domain (IIICS), the expression of which is controlled by complex alternative splicing of precursor mRNA. Using affinity chromatography on a matrix containing a synthetic peptide ligand (CS1) representing the strongest active site within the IIICS, we have isolated the human melanoma cell receptors recognizing this region of fibronectin. The results identify the human fibronectin IIICS receptor as the integrin heterodimer alpha sub(4) beta sub(1).

L24 ANSWER 21 OF 24 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 91115970 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1703545

TITLE: The vitronectin receptor alpha v beta 3 binds fibronectin and acts in concert with alpha 5 beta 1 in promoting cellular attachment and spreading on fibronectin.
AUTHOR: Charo I F; Nannizzi L; Smith J W; Cheresh D A
CORPORATE SOURCE: COR Therapeutics, Inc., South San Francisco, California 94080.
SOURCE: The Journal of cell biology, (1990 Dec) Vol. 111, No. 6 Pt 1, pp. 2795-800.
Journal code: 0375356. ISSN: 0021-9525.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199103
ENTRY DATE: Entered STN: 29 Mar 1991
Last Updated on STN: 3 Feb 1997
Entered Medline: 1 Mar 1991

AB The vitronectin receptor (alpha v beta 3) is a member of the integrin superfamily of adhesive protein receptors that mediate a wide spectrum of adhesive cellular interactions, including attachment to vitronectin, von Willebrand factor, fibrinogen, and thrombospondin. We have studied the binding of fibronectin to the purified vitronectin receptor, and the role of this receptor in the attachment of cells to fibronectin. A solid-phase microtiter assay was developed to investigate the binding properties of the vitronectin receptor. Purified alpha v beta 3 bound fibronectin with high affinity in a saturable, divalent cation-dependent manner. Binding was inhibited by soluble vitronectin, by RGD-containing peptides, and by LM609, a monoclonal antibody against the vitronectin receptor known to inhibit the binding of adhesive proteins to alpha v beta 3. Immunoinhibition experiments showed that M21 human melanoma cells, which express the fibronectin receptor, alpha 5 beta 1, as well as alpha v beta 3, used both of these integrins to attach and spread on fibronectin. In support of this finding, M21-L cells, a variant cell line that specifically lacks alpha v beta 3 but expresses alpha v beta 1, attached and spread poorly on fibronectin. In addition, alpha v beta 3 from surface-labeled M21 cells was retained, and selectively eluted by RGDS from a fibronectin affinity column. These results indicate that alpha v beta 3 acts in concert with alpha 5 beta 1 in promoting fibronectin recognition by these cells. We conclude that fibronectin binds to the alpha v beta 3 vitronectin receptor specifically and with high affinity, and that this interaction is biologically relevant in supporting cell adhesion to matrix proteins.

L24 ANSWER 22 OF 24 MEDLINE on STN DUPLICATE 8
ACCESSION NUMBER: 91082930 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2260635
TITLE: Alternative splicing of endothelial cell fibronectin mRNA in the IIICS region. Functional significance.
AUTHOR: Kocher O; Kennedy S P; Madri J A
CORPORATE SOURCE: Department of Pathology, Yale University School of Medicine, New Haven, Connecticut 06510.
CONTRACT NUMBER: HL-RO1-28373 (NHLBI)
PO1-DK-38979 (NIDDK)
SOURCE: The American journal of pathology, (1990 Dec) Vol. 137, No. 6, pp. 1509-24.
Journal code: 0370502. ISSN: 0002-9440.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199101
ENTRY DATE: Entered STN: 22 Mar 1991

Last Updated on STN: 3 Feb 1997
Entered Medline: 25 Jan 1991

AB Transforming growth factor-beta 1 (TGF-beta 1) is thought to play a role in modulating vascular cell function in vivo. In vitro, it decreases endothelial cell proliferation and migration. We postulated that these biologic activities could be mediated through TGF-beta 1 modulation of specific gene expression. Therefore we differentially screened a human umbilical vein endothelial cell cDNA library with cDNAs prepared from both untreated and TGF-beta 1-treated bovine aortic endothelial cells. Using this technique, we isolated many TGF-beta 1-induced cDNA clones. Sequence analysis of these cDNAs showed that many of them corresponded to alternatively spliced fibronectin mRNAs. These fibronectin clones all contained the extradomain I (ED I) but three different forms of the type III connecting segment (IIICS). These different fibronectin cDNAs were expressed in bacteria and the recombinant proteins used to study the effects of IIICS alternative splicing on cell attachment, spreading, and migration in bovine aortic endothelial and smooth muscle cells and B16F10 melanoma cells. The results of these experiments show that attachment and spreading of bovine aortic endothelial and smooth muscle cells depend primarily on the presence of the Arg-Gly-Asp-Ser (RGDS) sequence in the recombinant fibronectin proteins. However attachment and spreading of bovine aortic endothelial cells are modulated by alternative splicing in the IIICS region. Specifically splicing of the IIICS region decreases spreading and increases migration rates of the endothelial cells. On the contrary, using a cell line (B16F10 melanoma cells) that is known not to require the RGDS sequence for adhesion confirmed previous findings that B16F10 melanoma cells do not require the presence of the RGDS sequence for attachment and spreading. Indeed B16F10 cells were able to attach and spread on two recombinant proteins that did not contain the RGDS sequence. However attachment and spreading of B16F10 were dramatically inhibited when a 75-base pair DNA fragment was removed from the 5' end of the IIICS region. These results suggest that various regions of the fibronectin molecule may be able to interact with different cell populations to promote cell attachment and spreading, and that alternative splicing may modulate this process.

L24 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:227384 HCAPLUS
DOCUMENT NUMBER: 110:227384
TITLE: Identification of two distinct regions of an alternatively spliced site in human plasma fibronectin that promotes cell-type specific adhesion
AUTHOR(S): Humphries, Martin J.; Komoriya, Akira; Akiyama, Steven K.; Olden, Kenneth; Yamada, Kenneth M.
CORPORATE SOURCE: Cancer Cent., Howard Univ., Washington, DC, 20060, USA
SOURCE: Pept.: Chem. Biol., Proc. Am. Pept. Symp. 10th (1988), Meeting Date 1987, 632-4. Editor(s): Marshall, Garland R. ESCOM Sci. Pub.: Leiden, Neth. CODEN: 56MDA6
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Two distinct regions of alternatively spliced site were identified in human plasma fibronectin. This cell-type specific adhesion site (which promotes melanoma cell but not fibroblastic kidney cell adhesion) was localized in the type III connecting segment (CS). Results suggested both regions of III CS function sep. or together in mediating melanoma cell interactions with fibronectin.

L24 ANSWER 24 OF 24 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1986:15719 BIOSIS

DOCUMENT NUMBER: PREV198630015719; BR30:15719
TITLE: ANALYSIS OF FIBRONECTIN ASSOCIATED WITH MELANOMA TUMOR CELLS IN-VITRO BEFORE AND AFTER TREATMENT WITH ACTINOMYCIN D.
AUTHOR(S): WAGNER H N JR [Reprint author]; HENDRIX M J C
CORPORATE SOURCE: DEP ANATOMY, COLL MED, UNIV ARIZ, TUCSON, ARIZ 85724, USA
SOURCE: Cell Differentiation, (1985) Vol. 16, No. SUPPL, pp. 138S.
Meeting Info.: 10TH INTERNATIONAL CONGRESS OF THE INTERNATIONAL SOCIETY OF DEVELOPMENTAL BIOLOGISTS ON NEW DISCOVERIES AND TECHNOLOGIES, LOS ANGELES, CALIF., USA, AUG. 4-9, 1985. CELL DIFFER.
CODEN: CLDFAT. ISSN: 0045-6039.
DOCUMENT TYPE: Conference; (Meeting)
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 25 Apr 1986
Last Updated on STN: 25 Apr 1986

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FULL ESTIMATED COST	116.66	148.36

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	141.74	177.18

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        195013 292/RVL
        283775 583/RPG
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L16  ANSWER 1 OF 10  SCISEARCH  COPYRIGHT (c) 2007 The Thomson Corporation  on
     STN
ACCESSION NUMBER:    2007:636415  SCISEARCH
THE GENUINE ARTICLE: 170FP
TITLE:               Construction and characterization of a high-affinity
                     humanized SM5-1 monoclonal antibody
AUTHOR:              Li, Bohua; Wang, Hao; Zhang, Dapeng; Qian, Wezhu; Hou,
                     Sheng; Shi, Shu; Zhao, Lei; Kou, Geng; Cao, Zhiguo; Dai,
                     Jianxin; Guo, Yajun (Reprint)
CORPORATE SOURCE:    Mil Med Coll 2, Int Joint Canc Inst, 800 Xiangyin Rd,
                     Shanghai 200433, Peoples R China (Reprint); Mil Med Coll
                     2, Int Joint Canc Inst, Shanghai 200433, Peoples R China;
                     Shanghai Ctr Cell Engn & Antibody, Shanghai 201203,
                     Peoples R China
                     yjguo@smmu.edu.cn
COUNTRY OF AUTHOR:   Peoples R China
SOURCE:              BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (15
                     JUN 2007) Vol. 357, No. 4, pp. 951-956.
                     ISSN: 0006-291X.
PUBLISHER:           ACADEMIC PRESS INC ELSEVIER SCIENCE, 525 B ST, STE 1900,
                     SAN DIEGO, CA 92101-4495 USA.
DOCUMENT TYPE:       Article; Journal
LANGUAGE:            English
REFERENCE COUNT:     29
ENTRY DATE:          Entered STN: 12 Jul 2007
                     Last Updated on STN: 12 Jul 2007
                    *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

L16  ANSWER 2 OF 10  SCISEARCH  COPYRIGHT (c) 2007 The Thomson Corporation  on
     STN
ACCESSION NUMBER:    2006:1108266  SCISEARCH
THE GENUINE ARTICLE: 101RK
TITLE:               Pathologic reporting and special diagnostic techniques for
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melanoma
AUTHOR: Cochran, Alistair J. (Reprint); Starz, Hans; Ohsie, Steven J.; Sarantopoulos, G. Peter; Haas, Christian J.; Binder, Scott
CORPORATE SOURCE: Univ Calif Los Angeles, David Geffen Sch Med, Dept Pathol & Lab Med, 10833 LeConte Ave, Los Angeles, CA 90095 USA (Reprint); Univ Calif Los Angeles, David Geffen Sch Med, Dept Pathol & Lab Med, Los Angeles, CA 90095 USA; Univ Calif Los Angeles, David Geffen Sch Med, Dept Surg, Los Angeles, CA 90095 USA; ZentralKlinikum, Dept Dermatol, Augsburg, Germany; ZentralKlinikum, Dept Allergol, Augsburg, Germany
acochran@mednet.ucla.edu
COUNTRY OF AUTHOR: USA; Germany
SOURCE: SURGICAL ONCOLOGY CLINICS OF NORTH AMERICA, (APR 2006) Vol. 15, No. 2, pp. 231-+.
ISSN: 1055-3207.
PUBLISHER: W B SAUNDERS CO-ELSEVIER INC, 1600 JOHN F KENNEDY BOULEVARD, STE 1800, PHILADELPHIA, PA 19103-2899 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 99
ENTRY DATE: Entered STN: 23 Nov 2006
Last Updated on STN: 23 Nov 2006
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L16 ANSWER 3 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:472402 SCISEARCH
THE GENUINE ARTICLE: 038ZV
TITLE: Concordant loss of melanoma differentiation antigens in synchronous and asynchronous melanoma metastases: implications for immunotherapy
AUTHOR: Trefzer U (Reprint); Hofmann M; Reinke S; Guo Y J; Audring H; Spagnoli G; Sterry W
CORPORATE SOURCE: Univ Med Berlin, Charite, Skin Canc Ctr, Dept Dermatol & Allergy, Schumannstr 20-21, D-10117 Berlin, Germany (Reprint); Univ Med Berlin, Charite, Skin Canc Ctr, Dept Dermatol & Allergy, D-10117 Berlin, Germany; Tumour Immunol & Gene Therapy Ctr, Eastern Inst Hepatobiliary Surg, Shanghai, Peoples R China; Univ Basel Hosp, Dept Surg, CH-4031 Basel, Switzerland
uwe.trefzer@charite.de
COUNTRY OF AUTHOR: Germany; Peoples R China; Switzerland
SOURCE: MELANOMA RESEARCH, (APR 2006) Vol. 16, No. 2, pp. 137-145.
ISSN: 0960-8931.
PUBLISHER: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3621 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 42
ENTRY DATE: Entered STN: 18 May 2006
Last Updated on STN: 18 May 2006
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L16 ANSWER 4 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:122190 SCISEARCH
THE GENUINE ARTICLE: 006HT
TITLE: The monoclonal antibody SM5-1 recognizes a fibronectin variant which is widely expressed in melanoma
AUTHOR: Trefzer U (Reprint); Chen Y W; Herberth G; Hofmann M A;

Kiecker F; Guo Y J; Sterry W
CORPORATE SOURCE: Charite Univ Med Berlin, Dept Dermatol & Allergy, Skin Canc Ctr, Schumannstr 20-21, D-10117 Berlin, Germany (Reprint); Charite Univ Med Berlin, Dept Dermatol & Allergy, Skin Canc Ctr, D-10117 Berlin, Germany; Ctr Environm Res Leipzig Halle Ltd, Dept Environm Immunol, Leipzig, Germany; Mil Med Coll 2, Eastern Inst Hepatobiliary Surg, Shanghai, Peoples R China; Mil Med Coll 2, Int Canc Inst, Shanghai, Peoples R China
uwe.trefzer@charite.de; Yingwen@lycos.com; gunda.herberth@ufz.de; maja.hofmann@charite.de; felix.kiecker@charite.de; yguo@unmc.edu; wolfram.sterry@charite.de
COUNTRY OF AUTHOR: Germany; Peoples R China
SOURCE: BMC CANCER, (11 JAN 2006) Vol. 6, arn. 8.
ISSN: 1471-2407.
PUBLISHER: BIOMED CENTRAL LTD, MIDDLESEX HOUSE, 34-42 CLEVELAND ST, LONDON W1T 4LB, ENGLAND.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 56
ENTRY DATE: Entered STN: 9 Feb 2006
Last Updated on STN: 9 Feb 2006
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L16 ANSWER 5 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:1005415 SCISEARCH
THE GENUINE ARTICLE: 969PE
TITLE: Differential expression of MART-1, tyrosinase, and SM5-1 in primary and metastatic melanoma
AUTHOR: Reinke S; Koniger P; Herberth G; Audring H; Wang H; Ma J; Guo Y J; Sterry F; Trefzer U (Reprint)
CORPORATE SOURCE: Charite Univ Med Berlin, Skin Canc Ctr, Dept Dermatol & Allergy, Schumannstr 20-21, D-10117 Berlin, Germany (Reprint); Charite Univ Med Berlin, Skin Canc Ctr, Dept Dermatol & Allergy, D-10117 Berlin, Germany; Univ G DAnnunzio, Dept Dermatol, Chieti, Italy; Mil Med Coll 2, Int Canc Institut, Shanghai, Peoples R China; Mil Med Coll 2, Eastern Inst Hepatobiliary Surg, Shanghai, Peoples R China
uwe.trefzer@charite.de
COUNTRY OF AUTHOR: Germany; Italy; Peoples R China
SOURCE: AMERICAN JOURNAL OF DERMATOPATHOLOGY, (OCT 2005) Vol. 27, No. 5, pp. 401-406.
ISSN: 0193-1091.
PUBLISHER: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3261 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 19
ENTRY DATE: Entered STN: 20 Oct 2005
Last Updated on STN: 20 Oct 2005
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L16 ANSWER 6 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:510378 SCISEARCH
THE GENUINE ARTICLE: 824IX
TITLE: Melanocytes express 3G5 surface antigen
AUTHOR: Fiedler E; Nayak R C; Marsch W C; Helmbold P (Reprint)
CORPORATE SOURCE: Univ Halle Wittenberg, Dept Dermatol, D-06097 Halle Saale,

Germany (Reprint); Univ Halle Wittenberg, Dept Dermatol & Venereol, D-06097 Halle Saale, Saale, Germany; Univ Arizona, Coll Med, Dept Ophthalmol, Tucson, AZ USA
COUNTRY OF AUTHOR: Germany; USA
SOURCE: AMERICAN JOURNAL OF DERMATOPATHOLOGY, (JUN 2004) Vol. 26, No. 3, pp. 200-204.
ISSN: 0193-1091.
PUBLISHER: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3621 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 19
ENTRY DATE: Entered STN: 25 Jun 2004
Last Updated on STN: 25 Jun 2004
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L16 ANSWER 7 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:435533 SCISEARCH
THE GENUINE ARTICLE: 816WE
TITLE: Standard immunostains for melanoma in sentinel lymph node specimens: Which ones are most useful?
AUTHOR: Karimipour D J (Reprint); Lowe L; Su L D; Hamilton T; Sondak V; Johnson T M; Fullen D
CORPORATE SOURCE: Univ Michigan, Hlth Syst, Dept Dermatol, Taubman Ctr 1910, 1500 E Med Ctr Dr, Ann Arbor, MI 48109 USA (Reprint); Univ Michigan, Hlth Syst, Dept Dermatol, Taubman Ctr 1910, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Sect Stat, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Dept Pathol, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Dept Surg, Div Surg Oncol, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Div Plast Surg, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Div Otorhinolaryngol, Ann Arbor, MI 48109 USA
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF THE AMERICAN ACADEMY OF DERMATOLOGY, (MAY 2004) Vol. 50, No. 5, pp. 759-764.
ISSN: 0190-9622.
PUBLISHER: MOSBY, INC, 11830 WESTLINE INDUSTRIAL DR, ST LOUIS, MO 63146-3318 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 33
ENTRY DATE: Entered STN: 28 May 2004
Last Updated on STN: 28 May 2004
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L16 ANSWER 8 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:350933 SCISEARCH
THE GENUINE ARTICLE: 669QD
TITLE: Targeting the proteome/epitome, implementation of subtractive immunization
AUTHOR: Zijlstra A; Testa J E; Quigley J P (Reprint)
CORPORATE SOURCE: Scripps Res Inst, Dept Cell Biol, Div Vasc Biol, 10550 N Torrey Pine Rd, La Jolla, CA USA (Reprint); Scripps Res Inst, Dept Cell Biol, Div Vasc Biol, La Jolla, CA USA
COUNTRY OF AUTHOR: USA
SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (11 APR 2003) Vol. 303, No. 3, pp. 733-744.
ISSN: 0006-291X.
PUBLISHER: ACADEMIC PRESS INC ELSEVIER SCIENCE, 525 B ST, STE 1900,

SAN DIEGO, CA 92101-4495 USA.
DOCUMENT TYPE: Editorial; Journal
LANGUAGE: English
REFERENCE COUNT: 71
ENTRY DATE: Entered STN: 9 May 2003
Last Updated on STN: 9 May 2003
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L16 ANSWER 9 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:845906 SCISEARCH
THE GENUINE ARTICLE: 601TN
TITLE: Preparation of monoclonal antibody against apoptosis-associated antigens of hepatoma cells by subtractive immunization
AUTHOR: Yang L J; Wang W L (Reprint)
CORPORATE SOURCE: Fourth Mil Med Univ, Dept Pathol, Canc Res Inst, Xian 710032, Shaanxi, Peoples R China (Reprint)
COUNTRY OF AUTHOR: Peoples R China
SOURCE: WORLD JOURNAL OF GASTROENTEROLOGY, (OCT 2002) Vol. 8, No. 5, pp. 808-814.
ISSN: 1007-9327.
PUBLISHER: W J G PRESS, PO BOX 2345, BEIJING 100023, PEOPLES R CHINA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 66
ENTRY DATE: Entered STN: 1 Nov 2002
Last Updated on STN: 1 Nov 2002
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L16 ANSWER 10 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2002:264554 SCISEARCH
THE GENUINE ARTICLE: 528MZ
TITLE: Classical and new diagnostic approaches to melanocytic tumors
AUTHOR: Rudolph R (Reprint)
CORPORATE SOURCE: Univ Kiel, Inst Pathol Christian Albrechts, Michaelisstr 11, D-24105 Kiel, Germany (Reprint); Univ Kiel, Inst Pathol Christian Albrechts, D-24105 Kiel, Germany
COUNTRY OF AUTHOR: Germany
SOURCE: PATHOLOGE, (JAN 2002) Vol. 23, No. 1, pp. 89-96.
ISSN: 0172-8113.
PUBLISHER: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: German
REFERENCE COUNT: 30
ENTRY DATE: Entered STN: 5 Apr 2002
Last Updated on STN: 5 Apr 2002
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L16 ANSWER 1 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2007:636415 SCISEARCH
THE GENUINE ARTICLE: 170FP
TITLE: Construction and characterization of a high-affinity humanized SM5-1 monoclonal antibody
AUTHOR: Li, Bohua; Wang, Hao; Zhang, Dapeng; Qian, Wezhu; Hou, Sheng; Shi, Shu; Zhao, Lei; Kou, Geng; Cao, Zhiguo; Dai,

Jianxin; Guo, Yajun (Reprint)
CORPORATE SOURCE: Mil Med Coll 2, Int Joint Canc Inst, 800 Xiangyin Rd, Shanghai 200433, Peoples R China (Reprint); Mil Med Coll 2, Int Joint Canc Inst, Shanghai 200433, Peoples R China; Shanghai Ctr Cell Engn & Antibody, Shanghai 201203, Peoples R China
yjguo@smmu.edu.cn
COUNTRY OF AUTHOR: Peoples R China
SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (15 JUN 2007) Vol. 357, No. 4, pp. 951-956.
ISSN: 0006-291X.
PUBLISHER: ACADEMIC PRESS INC ELSEVIER SCIENCE, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 29
ENTRY DATE: Entered STN: 12 Jul 2007
Last Updated on STN: 12 Jul 2007
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB SM5-1 is a mouse monoclonal antibody which has a high specificity for melanoma, hepatocellular carcinoma, and breast cancer, making it a promising candidate for cancer targeting therapy. We have therefore attempted to construct a humanized antibody of SM5-1 to minimize its immunogenicity for potential clinical use. Using a molecular model of SM5-1 built by computer-assisted homology modeling, framework region (FR) residues of potential importance to the antigen binding were identified. Then, a humanized version of SM5-1 was generated by transferring these mouse key FR residues onto a human framework that was selected based on homology to the mouse framework, together with the mouse complementarity-determining region (CDR) residues. This humanized antibody retained only six murine residues outside of the CDRs but was shown to possess affinity and specificity comparable to that of the parental antibody, suggesting that it might have the potential to be developed for future clinical use. (c) 2007 Elsevier Inc. All rights reserved.

L16 ANSWER 2 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:1108266 SCISEARCH
THE GENUINE ARTICLE: 101RK
TITLE: Pathologic reporting and special diagnostic techniques for melanoma
AUTHOR: Cochran, Alistair J. (Reprint); Starz, Hans; Ohsie, Steven J.; Sarantopoulos, G. Peter; Haas, Christian J.; Binder, Scott
CORPORATE SOURCE: Univ Calif Los Angeles, David Geffen Sch Med, Dept Pathol & Lab Med, 10833 LeConte Ave, Los Angeles, CA 90095 USA (Reprint); Univ Calif Los Angeles, David Geffen Sch Med, Dept Pathol & Lab Med, Los Angeles, CA 90095 USA; Univ Calif Los Angeles, David Geffen Sch Med, Dept Surg, Los Angeles, CA 90095 USA; ZentralKlinikum, Dept Dermatol, Augsburg, Germany; ZentralKlinikum, Dept Allergol, Augsburg, Germany
acochran@mednet.ucla.edu
COUNTRY OF AUTHOR: USA; Germany
SOURCE: SURGICAL ONCOLOGY CLINICS OF NORTH AMERICA, (APR 2006) Vol. 15, No. 2, pp. 231-+.
ISSN: 1055-3207.
PUBLISHER: W B SAUNDERS CO-ELSEVIER INC, 1600 JOHN F KENNEDY BOULEVARD, STE 1800, PHILADELPHIA, PA 19103-2899 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English

REFERENCE COUNT: 99
ENTRY DATE: Entered STN: 23 Nov 2006
Last Updated on STN: 23 Nov 2006
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Pathologists play a central role in the management of cutaneous melanoma in determining that a tumor is a melanoma, whether or not it is primary or metastatic, and whether or not the margins of excision are tumor free and in evaluating prognostic indicators from examination of the primary tumor and, where appropriate, lymph nodes, including the sentinel nodes.

L16 ANSWER 3 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2006:472402 SCISEARCH
THE GENUINE ARTICLE: 038ZV
TITLE: Concordant loss of melanoma differentiation antigens in synchronous and asynchronous melanoma metastases: implications for immunotherapy
AUTHOR: Trefzer U (Reprint); Hofmann M; Reinke S; Guo Y J; Audring H; Spagnoli G; Sterry W
CORPORATE SOURCE: Univ Med Berlin, Charite, Skin Canc Ctr, Dept Dermatol & Allergy, Schumannstr 20-21, D-10117 Berlin, Germany (Reprint); Univ Med Berlin, Charite, Skin Canc Ctr, Dept Dermatol & Allergy, D-10117 Berlin, Germany; Tumour Immunol & Gene Therapy Ctr, Eastern Inst Hepatobiliary Surg, Shanghai, Peoples R China; Univ Basel Hosp, Dept Surg, CH-4031 Basel, Switzerland
uwe.trefzer@charite.de
COUNTRY OF AUTHOR: Germany; Peoples R China; Switzerland
SOURCE: MELANOMA RESEARCH, (APR 2006) Vol. 16, No. 2, pp. 137-145. ISSN: 0960-8931.
PUBLISHER: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3621 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 42
ENTRY DATE: Entered STN: 18 May 2006
Last Updated on STN: 18 May 2006
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Because of its known heterogeneity, the analysis of antigen expression is crucial prior to the initiation of antigen-specific immunotherapy for melanoma. The melanoma differentiation antigens gp100, MART-1 and tyrosinase are involved in a common pathway of melanin synthesis. Peptides derived from these melanoma differentiation antigens are used in the immunotherapy of melanoma and antibodies recognizing these antigens are commonly applied to detect melanocytic lesions. One hundred and ninety-one paraffin-em bedded melanoma metastases from 28 patients with 2-19 lesions (mean, 6.8) developing synchronously (n = 67) or asynchronously (n = 124) were analysed by immunohistochemistry for the expression of the melanoma differentiation antigens, as well as cancer/testis antigens of the melanoma ant gen(MAGE-A) family (monoclonal antibodies 77B and 57B), anti-S100 and SM5-1. The overall reactivities were 81.6% (gP100), 79.5% (MART-1), 59.6% (tyrosinase), 59.1% (77B), 60.7% (57B), 93.2% (S100) and 91.6% (SM5-1). Twenty-seven lesions (114.1%) were positive for all tumour-associated antigens, 75 lesions (39.2%) were negative for one antigen and 87 lesions (45.5%) were negative for several tumour-associated antigens. Co-ordinated loss was found for lesions negative for gp100 and MART-11 (9.4%, P < 0.0005), gp100 and tyrosinase (11.0%, P = 0.009), MART-1 and tyrosinase (15.2%, P < 0.0005) and gp100, MART-1 and tyrosinase (8.9%, P < 0.0005), which is up to six times higher than the expected calculated loss. This co-ordinated loss of melanoma differentiation antigens in melanoma did not include cancer testis

antigens and S100 or SM5-1. On average, the melanoma differentiation antigens stained 50-65% of cells within a lesion, and 10-39% of synchronous clusters were heterogeneous for melanoma differentiation antigen expression. In conclusion, broader polypeptide vaccines should be used for melanoma immunotherapy.

L16 ANSWER 4 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:122190 SCISEARCH
THE GENUINE ARTICLE: 006HT
TITLE: The monoclonal antibody SM5-1 recognizes a fibronectin variant which is widely expressed in melanoma
AUTHOR: Trefzer U (Reprint); Chen Y W; Herberth G; Hofmann M A; Kiecker F; Guo Y J; Sterry W
CORPORATE SOURCE: Charite Univ Med Berlin, Dept Dermatol & Allergy, Skin Canc Ctr, Schumannstr 20-21, D-10117 Berlin, Germany (Reprint); Charite Univ Med Berlin, Dept Dermatol & Allergy, Skin Canc Ctr, D-10117 Berlin, Germany; Ctr Environm Res Leipzig Halle Ltd, Dept Environm Immunol, Leipzig, Germany; Mil Med Coll 2, Eastern Inst Hepatobiliary Surg, Shanghai, Peoples R China; Mil Med Coll 2, Int Canc Inst, Shanghai, Peoples R China
uwe.trefzer@charite.de; Yingwen@lycos.com; gunda.herberth@ufz.de; maja.hofmann@charite.de; felix.kiecker@charite.de; yguo@unmc.edu; wolfram.sterry@charite.de
COUNTRY OF AUTHOR: Germany; Peoples R China
SOURCE: BMC CANCER, (11 JAN 2006) Vol. 6, arn. 8.
ISSN: 1471-2407.
PUBLISHER: BIOMED CENTRAL LTD, MIDDLESEX HOUSE, 34-42 CLEVELAND ST, LONDON W1T 4LB, ENGLAND.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 56
ENTRY DATE: Entered STN: 9 Feb 2006
Last Updated on STN: 9 Feb 2006

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Background: Previously we have generated the monoclonal antibody SM5-1 by using a subtractive immunization protocol of human melanoma. This antibody exhibits a high sensitivity for primary melanomas of 99% (248/250 tested) and for metastatic melanoma of 96% (146/151 tested) in paraffin embedded sections. This reactivity is superior to the one obtained by HMB-45, anti-MelanA or anti-Tyrosinase and is comparable to anti-S100. However, as compared to anti-S100, the antibody SM5-1 is highly specific for melanocytic lesions since 40 different neoplasms were found to be negative for SM5-1 by immunohistochemistry. The antigen recognized by SM5-1 is unknown.

Methods: In order to characterize the antigen recognized by mAb SM5-1, a cDNA library was constructed from the metastatic human melanoma cell line SMMUpos in the Uni-ZAP lambda phage and screened by mAb SM5-1. The cDNA clones identified by this approach were then sequenced and subsequently analyzed.

Results: Sequence analysis of nine independent overlapping clones (length 3100-5600 bp) represent fibronectin cDNA including the ED-A, but not the ED-B region which are produced by alternative splicing. The 89aa splicing variant of the IIICS region was found in 8/9 clones and the 120aa splicing variant in 1/9 clones, both of which are included in the CS1 region of fibronectin being involved in melanoma cell adhesion and spreading.

Conclusion: The molecule recognized by SM5-1 is a melanoma associated FN variant expressed by virtually all primary and metastatic melanomas and may play an important role in melanoma formation and progression. This

antibody is therefore not only of value in immunohistochemistry, but potentially also for diagnostic imaging and immunotherapy.

L16 ANSWER 5 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2005:1005415 SCISEARCH
THE GENUINE ARTICLE: 969PE
TITLE: Differential expression of MART-1, tyrosinase, and SM5-1 in primary and metastatic melanoma
AUTHOR: Reinke S; Koniger P; Herberth G; Audring H; Wang H; Ma J; Guo Y J; Sterry F; Trefzer U (Reprint)
CORPORATE SOURCE: Charite Univ Med Berlin, Skin Canc Ctr, Dept Dermatol & Allergy, Schumannstr 20-21, D-10117 Berlin, Germany (Reprint); Charite Univ Med Berlin, Skin Canc Ctr, Dept Dermatol & Allergy, D-10117 Berlin, Germany; Univ G DAnnunzio, Dept Dermatol, Chieti, Italy; Mil Med Coll 2, Int Canc Institut, Shanghai, Peoples R China; Mil Med Coll 2, Eastern Inst Hepatobiliary Surg, Shanghai, Peoples R China
uwe.trefzer@charite.de
COUNTRY OF AUTHOR: Germany; Italy; Peoples R China
SOURCE: AMERICAN JOURNAL OF DERMATOPATHOLOGY, (OCT 2005) Vol. 27, No. 5, pp. 401-406.
ISSN: 0193-1091.
PUBLISHER: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3261 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 19
ENTRY DATE: Entered STN: 20 Oct 2005
Last Updated on STN: 20 Oct 2005
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The new monoclonal antibody SM5-1 has been shown to have significant advantages in immunohistochemistry of melanoma over currently used antibodies such as HMB-45 or anti-S100. In this study we compared the immunohistological staining pattern of SM5-1 with that of the more recently described antibodies A103 (anti-MART-1) and T311 (anti-Tyrosinase) in 344 paraffin-embedded melanoma specimens, consisting of 101 primary melanomas (77 SSM, 16 NM, 6 ALM, 2 LMM) and 243 melanoma metastases. The overall reactivity of SM5-1 for all the specimens was 92% (318/344) compared with 83% (285/344) for MART-I and 71% (245/344) for Tyrosinase. Staining of melanoma metastases with SM5-1 was found in 91% (222/243), but only in 77% (187/243) with A103 and 63% (154/243) with T311, respectively. Staining with SM5-1 was more homogenous with 196 of 243 (80%) of metastatic lesions showing 50% or more positively stained cells within the lesions, whereas A103 and T311 did so in 141 of 243 (58%) or 117 of 243 (48%) of the lesions. With regard to staining intensity of SM5-1, 157 of 243 (64%) showed a strong or very strong staining intensity, whereas A103 and T311 did so in 85 of 243 (35%) or 70 of 243 (29%) of the lesions. Staining intensity and percentage positivity correlated well for SM5-1, because from the 58 very strong positive metastases 55 showed staining in more than 75% of the cells within a lesion. Importantly, 52 of 56 MART-1-negative metastases and 81 of 89 Tyrosinase-negative metastases were positive for SM5-1. Thirty-eight metastases (15.6%) were negative for both A] 03 and T311. Of those, 35 (92.1%) were positive for SM5-1, demonstrating the value of SM5-1 in identifying melanoma-associated antigen-negative lesions. We conclude that SM5-1 could be of value in immunohistochemistry of melanoma.

L16 ANSWER 6 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:510378 SCISEARCH

THE GENUINE ARTICLE: 824IX
TITLE: Melanocytes express 3G5 surface antigen
AUTHOR: Fiedler E; Nayak R C; Marsch W C; Helmbold P (Reprint)
CORPORATE SOURCE: Univ Halle Wittenberg, Dept Dermatol, D-06097 Halle Saale, Germany (Reprint); Univ Halle Wittenberg, Dept Dermatol & Venereol, D-06097 Halle Saale, Saale, Germany; Univ Arizona, Coll Med, Dept Ophthalmol, Tucson, AZ USA
COUNTRY OF AUTHOR: Germany; USA
SOURCE: AMERICAN JOURNAL OF DERMATOPATHOLOGY, (JUN 2004) Vol. 26, No. 3, pp. 200-204.
ISSN: 0193-1091.
PUBLISHER: LIPPINCOTT WILLIAMS & WILKINS, 530 WALNUT ST, PHILADELPHIA, PA 19106-3621 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 19
ENTRY DATE: Entered STN: 25 Jun 2004
Last Updated on STN: 25 Jun 2004
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The 3G5-reactive ganglioside antigen (3G5 antigen) is expressed on the surface of various cell types including pericytes, pancreatic islet cells, thyroid follicular cells, and cells of the pituitary and the adrenal medulla. Expression on melanocytes has not yet been reported. We examined 148 5-mum cryosections of 12 normal skin samples and 45 skin tumors (21 melanocytic nevi, 8 malignant melanoma primaries, 4 metastases of malignant melanoma, 3 basal cell carcinomas, and 9 pigmented seborrheic keratoses) by triple fluorescence technique with the monoclonal antibody 3G5, DNA fluorochrome, and the anti-melanocytic antibody A 103 (Anti-Melan-A). In normal skin, 3G5 reactivity was detected in epidermal melanocytes of 4 of 12 cases with 14.8 +/- 24.1% positive melanocytes; 20 of 21 nevi (72.2 +/- 29.1% positive nevus cells, mean SD), 8 of 8 primary melanomas (83.9 +/- 12.3% positive melanoma cells), and 4 of 4 melanoma metastases (82.5 +/- 6.5% positive melanoma cells) expressed the 3G5 antigen. All tumor cells of investigated basal cell carcinoma or seborrheic keratosis were 3G5 negative. This is the first report of 3G5 antigen expression in melanocytes. The data demonstrate high expression of this ganglioside in the aggregated melanocytes of malignant or benign tumors but low or absent expression in singular melanocytes (normal epidermis, seborrheic keratoses) reflecting a different biologic state.

L16 ANSWER 7 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:435533 SCISEARCH
THE GENUINE ARTICLE: 816WE
TITLE: Standard immunostains for melanoma in sentinel lymph node specimens: Which ones are most useful?
AUTHOR: Karimipour D J (Reprint); Lowe L; Su L D; Hamilton T; Sondak V; Johnson T M; Fullen D
CORPORATE SOURCE: Univ Michigan, Hlth Syst, Dept Dermatol, Taubman Ctr 1910, 1500 E Med Ctr Dr, Ann Arbor, MI 48109 USA (Reprint); Univ Michigan, Hlth Syst, Dept Dermatol, Taubman Ctr 1910, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Sect Stat, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Dept Pathol, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Dept Surg, Div Surg Oncol, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Div Plast Surg, Ann Arbor, MI 48109 USA; Univ Michigan, Ctr Med, Div Otorhinolaryngol, Ann Arbor, MI 48109 USA
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF THE AMERICAN ACADEMY OF DERMATOLOGY, (MAY 2004) Vol. 50, No. 5, pp. 759-764.
ISSN: 0190-9622.

PUBLISHER: MOSBY, INC, 11830 WESTLINE INDUSTRIAL DR, ST LOUIS, MO 63146-3318 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 33
ENTRY DATE: Entered STN: 28 May 2004
Last Updated on STN: 28 May 2004
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Background: Sentinel lymph node (SLN) biopsy in melanoma is an increasingly used procedure. Pathologic evaluation of SLNs using immunohistochemistry improves diagnostic accuracy, yet no universally accepted standard protocol for pathologic processing of SLNs exists.

Objective: The primary purpose of this study was to evaluate Our experience with the sensitivity of the immunostains S-100, HMB-45, and Melan-A for SLN biopsy.

Methods: Ninety-nine positive SLNs from 72 patients were retrospectively reviewed for the presence of microscopic metastatic melanoma on hematoxylin and eosin (H&E), S-100, HMB-45, and Melan-A stained sections and sensitivities of each immunohistochemical stain were determined.

Results: The sensitivities of S-100, HMB-45, and Melan-A were 97%, 75%, and 96% respectively.

Conclusion: Given the lower sensitivity of HMB-45, our practice for evaluation of SLN biopsy specimens was modified using combinations of H&E, S-100, and Melan-A without HMB-45. If the H&E sections are negative or equivocal for metastatic melanoma, immunohistochemistry staining with S-100 protein and Melan-A is performed. New and improved protocols will undoubtedly be forthcoming as the field advances.

L16 ANSWER 8 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 2003:350933 SCISEARCH
THE GENUINE ARTICLE: 669QD
TITLE: Targeting the proteome/epitome, implementation of subtractive immunization
AUTHOR: Zijlstra A; Testa J E; Quigley J P (Reprint)
CORPORATE SOURCE: Scripps Res Inst, Dept Cell Biol, Div Vasc Biol, 10550 N Torrey Pine Rd, La Jolla, CA USA (Reprint); Scripps Res Inst, Dept Cell Biol, Div Vasc Biol, La Jolla, CA USA
COUNTRY OF AUTHOR: USA
SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (11 APR 2003) Vol. 303, No. 3, pp. 733-744.
ISSN: 0006-291X.
PUBLISHER: ACADEMIC PRESS INC ELSEVIER SCIENCE, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495 USA.
DOCUMENT TYPE: Editorial; Journal
LANGUAGE: English
REFERENCE COUNT: 71
ENTRY DATE: Entered STN: 9 May 2003
Last Updated on STN: 9 May 2003
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Monoclonal antibody technology has generated invaluable tools for both the analytical and clinical sciences. However, standard immunization approaches frequently fail to provide monoclonal antibodies with the desired specificity. Subtractive immunization provides a powerful alternative to standard immunization and allows for the production of truly unique antibodies. With the intent of targeting specific epitopes within the proteome, subtractive immunization has been broadly and successfully implemented for the production of monoclonal antibodies otherwise unobtainable by standard immunization. Subtractive immunization utilizes a distinct immune tolerization approach that can substantially enhance the generation of monoclonal antibodies to desired antigens. The

approach is based on tolerizing the host animal to immunodominant or otherwise undesired antigen(s) (tolerogen) that may be structurally or functionally related to the antigen of interest. Tolerization of the host animal can be achieved through one of three methods: High Zone, Neonatal, or Drug-induced tolerization. The tolerized animal is then inoculated with the desired antigen (immunogen) and antibodies generated by the subsequent immune response are screened for the desired antigenic reactivity. Over the past 15 years a large number of investigators have used the subtractive approach with cleverly chosen tolerogen-immunogen combinations and successfully generated uniquely reactive antibodies which are often neutralizing or function-blocking. This review will focus on the implementation of subtractive immunization for the production of antibodies otherwise unobtainable by standard immunization.

L16 ANSWER 9 OF 10 SCISEARCH
ACCESSION NUMBER: 2002:845906 SCISEARCH
THE GENUINE ARTICLE: 601TN
TITLE: Preparation of monoclonal antibody against apoptosis-associated antigens of hepatoma cells by subtractive immunization
AUTHOR: Yang L J; Wang W L (Reprint)
CORPORATE SOURCE: Fourth Mil Med Univ, Dept Pathol, Canc Res Inst, Xian 710032, Shaanxi, Peoples R China (Reprint)
COUNTRY OF AUTHOR: Peoples R China
SOURCE: WORLD JOURNAL OF GASTROENTEROLOGY, (OCT 2002) Vol. 8, No. 5, pp. 808-814.
ISSN: 1007-9327.
PUBLISHER: W J G PRESS, PO BOX 2345, BEIJING 100023, PEOPLES R CHINA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 66
ENTRY DATE: Entered STN: 1 Nov 2002
Last Updated on STN: 1 Nov 2002
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB AIM: To elucidate the expression of the apoptosis-associated molecules in human primary hepatocellular carcinoma (HCC) cells, and prepare the monoclonal antibodies (mAb) against the apoptosis-associated antigens of HCC cells.

METHODS: Human HCC cell line HCC-9204 cells were induced apoptosis with 60 mL.L-1 ethanol for 6 h and their morphological changes were observed by transmission electron microscope. The cell DNA fragmentations were detected by Terminal Deoxynucleotidyl transferase-mediated dUTP nick end labeling (TUNEL) assay, and the cell DNA contents by flow cytometry. Ten mice were immunized with ethanol-induced apoptotic HCC-9204 cells with the method of subtractive immunization, while the other 10 mice used as the control were immunized by the routine procedures. The tail blood of all the mice were prepared after the last immunization, and the produced antibodies were determined by the immunocytochemical ABC staining. The splenic cells of the mice whose tail blood sera-HCC-9204 cells serum reactions were most different between the apoptotic and the non-apoptotic were prepared and fused with the mouse myeloma cell line SP2/0 cells. The positive antibodies were selected by ELISA assay. The fusion rates of hybridoma cells and the producing rates of antibodies were calculated. The fused cells that secreted candidate objective antibody were cloned continually with the of limited dilution method, and then selected and analyzed further by the immunocytochemical ABC staining. The chromosomes of the cloned hybridoma cells that secreted objective mAb and the mAb immunoglobulin (Ig) subtype of the prepared mAb were also determined. The molecular mass of the mAb associated antigen was analyzed by Western blot assay.

RESULTS: HCC-9204 cells treated with 60 mL.L-1 ethanol for 6 h, manifested obvious apoptotic morphological changes, the majority of the cells were TUNEL-positive, and the sub-G1 apoptotic peak was evident. There were 2 mice in the experimental group whose tail blood serum reacted strongly with the apoptotic HCC-9204 cells, but weakly with their non-apoptotic counterparts. In the fusion rates of hybridoma cells as well as the producing rates of the antibody described above, there did not show significant difference between the experimental and the control group, but weakly with non-apoptotic HCC-9204. However, the total producing rate of antibodies in the experimental group was significantly lower compared with the control ($P<0.01$), and so was the producing rate of the antibodies which reacted strongly with both apoptotic and non-apoptotic HCC-9204 cells ($P<0.01$). After cloned continually for several times the cell that produce mAb which reacted strongly with the nuclei of ethanol-induced apoptotic HCC-9204 cells, but very weakly with that of non-apoptotic cells was selected out. Chromosome analysis revealed that the selected cell was with the universal characteristics of the monoclonal hybridoma cells which secreted mAb, and the Ig subtype of the prepared mAb was IgG1. The molecular mass of this mAb associated antigen of was about 75 ku.

CONCLUSION: Subtractive immunization is a useful method to prepare the mAb against the apoptosis-associated antigens of cells. The expression of some molecules increases to some extent in HCC-9204 cells in the process of apoptosis induced by low-concentration ethanol. The mAb that may be against ethanol-induced apoptosis-associated antigens of HCC cells was successfully prepared and primarily identified.

L16 ANSWER 10 OF 10 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:264554 SCISEARCH
THE GENUINE ARTICLE: 528MZ
TITLE: Classical and new diagnostic approaches to melanocytic tumors
AUTHOR: Rudolph R (Reprint)
CORPORATE SOURCE: Univ Kiel, Inst Pathol Christian Albrechts, Michaelisstr 11, D-24105 Kiel, Germany (Reprint); Univ Kiel, Inst Pathol Christian Albrechts, D-24105 Kiel, Germany
COUNTRY OF AUTHOR: Germany
SOURCE: PATHOLOGE, (JAN 2002) Vol. 23, No. 1, pp. 89-96. ISSN: 0172-8113.
PUBLISHER: SPRINGER-VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: German
REFERENCE COUNT: 30
ENTRY DATE: Entered STN: 5 Apr 2002
Last Updated on STN: 5 Apr 2002

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Melanocytic tumors are one of the major problems in diagnostic dermatopathology as they comprise benign nevi, malignant melanomas and borderline cases. Apart from a proportion of congenital lesions, most benign nevi are acquired tumors that arise during early adulthood and eventually may undergo regressive change. Histologically, they present as so-called common nevi, so-called dysplastic nevi, Spitz's nevi, blue nevi and their variants, and combined nevi. In typical cases, the distinction from a malignant melanoma is not difficult. However, benign simulators of malignancy exist as much as deceptively bland appearing melanomas and in some cases the diagnosis remains dubious despite careful weighting of criteria. Indeed, morphological features may not always suffice to disclose the nature of a melanocytic tumor. Ancillary techniques including immunohistochemistry and measurement of telomerase activity may be of assistance in this respect. One should nevertheless be aware that the biological behavior of certain borderline cases cannot be predicted

with certainty.

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FULL ESTIMATED COST                                     133.22     310.40

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'RPY' IS NOT A VALID FIELD CODE
'RVL' IS NOT A VALID FIELD CODE
'RAU' IS NOT A VALID FIELD CODE
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             0 6/RVL
             0 TREFZER/RAU
L17          0 (2006/RPY(S)6/RVL(S)TREFZER/RAU)

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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FULL ESTIMATED COST                                       1.68     312.08

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=> s (2006/rpy(s)6/rvl(s)Trefzer/rau)
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       3920499 6/RVL
             2 TREFZER/RAU
L18          0 (2006/RPY(S)6/RVL(S)TREFZER/RAU)

=> s (2006/rpy(s)6/rvl(s)(Trefzer, U?)/rau)
        468729 2006/RPY
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       3920499 6/RVL
           252 (TREFZER, U?)/RAU
L19          0 (2006/RPY(S)6/RVL(S)(TREFZER, U?)/RAU)

=> s melanoma#
L20      64494 MELANOMA#

=> s (fibronectin or FN)(5w)variant#
         29502 FIBRONECTIN
          5547 FN
        139456 VARIANT#
L21         85 (FIBRONECTIN OR FN)(5W)VARIANT#

=> s (spliced or splicing)(5a)(fn or fibronectin#)
         10225 SPLICED
         24783 SPLICING
          5547 FN
         29631 FIBRONECTIN#
L22        321 (SPLICED OR SPLICING)(5A)(FN OR FIBRONECTIN#)

=> s l21 or l22
L23        379 L21 OR L22

=> s l20 and l23
L24         14 L20 AND L23

=> dup rem l24
PROCESSING COMPLETED FOR L24
L25         14 DUP REM L24 (0 DUPLICATES REMOVED)

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L25  ANSWER 1 OF 14  SCISEARCH  COPYRIGHT (c) 2007 The Thomson Corporation  on
     STN
ACCESSION NUMBER:    2006:625201  SCISEARCH
THE GENUINE ARTICLE: 055EV
TITLE:               Ligand density and integrin repertoire regulate cellular
                     response to LPA
AUTHOR:              Valenick L V; Schwarzbauer J E (Reprint)
CORPORATE SOURCE:    Princeton Univ, Dept Mol Biol, Princeton, NJ 08544 USA
                     (Reprint)
                     jschwarz@princeton.edu
COUNTRY OF AUTHOR:   USA
SOURCE:              MATRIX BIOLOGY, (MAY 2006) Vol. 25, No. 4, pp. 223-231.
                     ISSN: 0945-053X.
PUBLISHER:           ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM,
                     NETHERLANDS.
DOCUMENT TYPE:       Article; Journal
LANGUAGE:            English
REFERENCE COUNT:     50
ENTRY DATE:          Entered STN: 6 Jul 2006
                     Last Updated on STN: 6 Jul 2006
                    *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*
AB        Engagement of integrin receptors by the extracellular matrix (ECM)
     protein fibronectin (FN) activates intracellular signaling, cytoskeletal
     reorganization and cellular tension.  The soluble factor lysophosphatidic
     acid (LPA) acts through Rho GTPase and its effector Rho kinase (ROCK) to
     enhance alpha 5 beta 1 integrin-mediated cell spreading on the Arg-Gly-Asp
     (RGD) cell-binding domain of FN.  A second cell-binding site for alpha 4
     integrins resides in the CS1 segment of the alternatively spliced
     V region of FN.  We show here that LPA treatment of alpha 4 beta
     1-expressing CHO alpha 4 cells on FN induced a significant decrease in
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spread cell area. LPA also decreased apoptosis induced by serum-deprivation in CHO alpha 4 and human A375 melanoma cells in an alpha 4 beta 1-dependent manner. Improvement in cell viability and changes in cell morphology were dependent on ROCK and on the number of substrate binding sites for alpha 4 beta 1. LPA signaling combined with alpha 4 beta 1-mediated adhesion appears to sustain cell viability in situations where FN matrix is limiting. Such cooperation may impact dynamic cellular events such as wound healing, fibrosis, and metastasis.

L25 ANSWER 2 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2006:122190 SCISEARCH
THE GENUINE ARTICLE: 006HT
TITLE: The monoclonal antibody SM5-1 recognizes a fibronectin variant which is widely expressed in melanoma
AUTHOR: Trefzer U (Reprint); Chen Y W; Herberth G; Hofmann M A; Kiecker F; Guo Y J; Sterry W
CORPORATE SOURCE: Charite Univ Med Berlin, Dept Dermatol & Allergy, Skin Canc Ctr, Schumannstr 20-21, D-10117 Berlin, Germany (Reprint); Charite Univ Med Berlin, Dept Dermatol & Allergy, Skin Canc Ctr, D-10117 Berlin, Germany; Ctr Environm Res Leipzig Halle Ltd, Dept Environm Immunol, Leipzig, Germany; Mil Med Coll 2, Eastern Inst Hepatobiliary Surg, Shanghai, Peoples R China; Mil Med Coll 2, Int Canc Inst, Shanghai, Peoples R China
uwe.trefzer@charite.de; Yingwen@lycos.com; gunda.herberth@ufz.de; maja.hofmann@charite.de; felix.kiecker@charite.de; yguo@unmc.edu; wolfram.sterry@charite.de
COUNTRY OF AUTHOR: Germany; Peoples R China
SOURCE: BMC CANCER, (11 JAN 2006) Vol. 6, arn. 8.
ISSN: 1471-2407.
PUBLISHER: BIOMED CENTRAL LTD, MIDDLESEX HOUSE, 34-42 CLEVELAND ST, LONDON W1T 4LB, ENGLAND.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 56
ENTRY DATE: Entered STN: 9 Feb 2006
Last Updated on STN: 9 Feb 2006

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Background: Previously we have generated the monoclonal antibody SM5-1 by using a subtractive immunization protocol of human melanoma. This antibody exhibits a high sensitivity for primary melanomas of 99% (248/250 tested) and for metastatic melanoma of 96% (146/151 tested) in paraffin embedded sections. This reactivity is superior to the one obtained by HMB-45, anti-MelanA or anti-Tyrosinase and is comparable to anti-S100. However, as compared to anti-S100, the antibody SM5-1 is highly specific for melanocytic lesions since 40 different neoplasms were found to be negative for SM5-1 by immunohistochemistry. The antigen recognized by SM5-1 is unknown.

Methods: In order to characterize the antigen recognized by mAb SM5-1, a cDNA library was constructed from the metastatic human melanoma cell line SMMUpos in the Uni-ZAP lambda phage and screened by mAb SM5-1. The cDNA clones identified by this approach were then sequenced and subsequently analyzed.

Results: Sequence analysis of nine independent overlapping clones (length 3100-5600 bp) represent fibronectin cDNA including the ED-A, but not the ED-B region which are produced by alternative splicing. The 89aa splicing variant of the IIICS region was found in 8/9 clones and the 120aa

splicing variant in 1/9 clones, both of which are included in the CS1 region of fibronectin being involved in melanoma cell adhesion and spreading.

Conclusion: The molecule recognized by SM5-1 is a melanoma associated FN variant expressed by virtually all primary and metastatic melanomas and may play an important role in melanoma formation and progression. This antibody is therefore not only of value in immunohistochemistry, but potentially also for diagnostic imaging and immunotherapy.

L25 ANSWER 3 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:866120 SCISEARCH
THE GENUINE ARTICLE: 855QZ
TITLE: Direct test of potential roles of EIIIA and EIIIB alternatively spliced segments of fibronectin in physiological and tumor angiogenesis
AUTHOR: Astrof S; Crowley D; George E L; Fukuda T; Sekiguchi K; Hanahan D; Hynes R O (Reprint)
CORPORATE SOURCE: MIT, Howard Hughes Med Inst, Canc Res Ctr, Dept Biol, 77 Massachusetts Ave, Cambridge, MA 02139 USA (Reprint); MIT, Howard Hughes Med Inst, Canc Res Ctr, Dept Biol, Cambridge, MA 02139 USA; Brigham & Womens Hosp, Dept Pathol, Div Vasc Res, Boston, MA 02115 USA; Univ Calif San Francisco, Dept Biochem & Biophys, Ctr Comprehens Canc, San Francisco, CA USA; Univ Calif San Francisco, Ctr Diabet, San Francisco, CA USA; Osaka Univ, Inst Prot Res, Osaka, Japan
rohynes@mit.edu
COUNTRY OF AUTHOR: USA; Japan
SOURCE: MOLECULAR AND CELLULAR BIOLOGY, (OCT 2004) Vol. 24, No. 19, pp. 8662-8670.
ISSN: 0270-7306.
PUBLISHER: AMER SOC MICROBIOLOGY, 1752 N ST NW, WASHINGTON, DC 20036-2904 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 58
ENTRY DATE: Entered STN: 22 Oct 2004
Last Updated on STN: 22 Oct 2004

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Fibronectin splice variants containing the EIIIA and/or EIIIB exons are prominently expressed in the vasculature of a variety of human tumors but not in normal adult tissues. To understand the functions of these splice variants in physiological and tumor angiogenesis, we used EIIIB-null and EIIIA-null strains of mice to examine neovascularization of mouse retinas, pancreatic tumors in Rip-Tag transgenic mice, and transplanted melanomas. Contrary to expectations, physiological and tumor angiogenesis was not significantly affected by the absence of either EIIIA or EIIIB splice variants. Tumor growth was also not affected. In addition, the expression levels of smooth muscle alpha actin, believed to be modulated by EIIIA-containing fibronectins, were not affected either. Our experiments show that despite their tight regulation during angiogenesis, the presence of EIIIA or EIIIB splice variants individually is not essential for neovascularization.

L25 ANSWER 4 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2002:360578 SCISEARCH
THE GENUINE ARTICLE: 543HR
TITLE: Alternative splicing of the IIICS domain in

fibronectin governs the role of the heparin II domain in fibrillogenesis and cell spreading

AUTHOR: Santas A J; Peterson J A; Halbleib J L; Craig S E; Humphries M J; Peters D M P (Reprint)

CORPORATE SOURCE: Univ Wisconsin, Dept Pathol & Lab Med, Rm 6590 MSC, 1300 Univ Ave, Madison, WI 53706 USA (Reprint); Univ Wisconsin, Dept Pathol & Lab Med, Madison, WI 53706 USA; Univ Wisconsin, Dept Ophthalmol & Visual Sci, Madison, WI 53706 USA; Univ Manchester, Sch Biol Sci, Wellcome Trust Ctr Cell Matrix Res, Manchester M13 9PT, Lancs, England

COUNTRY OF AUTHOR: USA; England

SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (19 APR 2002) Vol. 277, No. 16, pp. 13650-13658.
ISSN: 0021-9258.

PUBLISHER: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3996 USA.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English

REFERENCE COUNT: 56

ENTRY DATE: Entered STN: 10 May 2002
Last Updated on STN: 10 May 2002

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The Heparin (Hep) II-binding domain of fibronectin regulates the formation of focal adhesions and actin stress fibers and hence plays an important role in cell spreading, migration, and fibronectin fibrillogenesis. Using human skin fibroblast cultures, we demonstrate that alternative splicing of the neighboring IIICS domain may regulate the activities of the Hep II domain in cell spreading and fibronectin fibrillogenesis. Recombinant Hep II domains, adjacent to either the IIICS domain or the H89 splice variant that contains the amino-terminal sequence of the IIICS domain, blocked fibronectin fibrillogenesis and required sulfated proteoglycans to mediate cell spreading. If the Hep 11 domain was adjacent to either the H0 or H95 splice variants, which both lack the amino terminus of the IIICS domain, fibrillogenesis was not inhibited and cell spreading was independent of a sulfated proteoglycan-mediated mechanism. The effect of the splice variants on the Hep 11 domain could be mimicked using a Hep II domain that contained only 6 amino acids from the 11115 repeat or 10 amino acids from the IIICS domain suggesting that sequences proximal to the 1,1,4 repeat determined the role of the Hep II domain in these processes. We propose that alternative splicing of the IIICS domain modulates interactions between heparan sulfate proteoglycans and the Hep II domain and that this serves as a mechanism to control the biological activities of fibronectin.

L25 ANSWER 5 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2001:325044 SCISEARCH

THE GENUINE ARTICLE: 419LN

TITLE: Identification of a novel heparin-binding site in the alternatively spliced IIICS region of fibronectin: roles of integrins and proteoglycans in cell adhesion to fibronectin splice variants

AUTHOR: Mostafavi-Pour Z; Askari J A; Whittard J D; Humphries M J (Reprint)

CORPORATE SOURCE: Univ Manchester, Sch Biol Sci, Wellcome Trust Ctr Cell Matrix Res, 2-205 Stopford Bldg, Oxford Rd, Manchester M13 9PT, Lancs, England (Reprint); Univ Manchester, Sch Biol Sci, Wellcome Trust Ctr Cell Matrix Res, Manchester M13 9PT, Lancs, England

COUNTRY OF AUTHOR: England

SOURCE: MATRIX BIOLOGY, (FEB 2001) Vol. 20, No. 1, pp. 63-73.

ISSN: 0945-053X.
PUBLISHER: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 46
ENTRY DATE: Entered STN: 27 Apr 2001
Last Updated on STN: 27 Apr 2001
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The extracellular matrix molecule fibronectin (FN) is a glycoprotein whose major functional property is to support cell adhesion. FN contains at least two distinct cell-binding domains: the central cell-binding domain and the HepII/IIICS region. The HepII region comprises type III repeats 12-14 and contains proteoglycan-binding sites, while the alternatively spliced IIICS segment possesses the major alpha4 beta1 integrin-binding sites. Both cell surface proteoglycans and integrins are important for mediating the adhesion of cells to this region of FN. By comparing heparin binding to different recombinant splice variants of the HepII/IIICS region, evidence was obtained for the existence of a novel heparin-binding site in the centre of the IIICS. Site-directed mutagenesis of basic amino acid sequences in this region reduced heparin binding to recombinant HepII/IIICS proteins and, in conjunction with mutations in the HepII region, caused a synergistic loss of activity. Using the H/120 variant of FN, which contains type III repeats 12-15 and the full-length IIICS region, and the H/95 variant of FN, which contains type III repeats 12-15 but lacks the high affinity integrin-binding LDV sequence, the relative roles played by cell-surface proteoglycans and integrins in mediating cell adhesion have been investigated. This was achieved by studying the effects of anti-integrin antibodies and exogenous heparin on A375 melanoma cell attachment to the wild-type and three different mutants of H/120 and H/95 in which the potential proteoglycan-binding sites were partially or completely removed. A375 cell adhesion to H/120 and its mutants was found to involve the co-operative action of both integrin and cell-surface proteoglycan binding, although integrin made a dominant contribution. Anti-integrin antibodies and exogenous heparin were capable of inhibiting melanoma cell adhesion to H/95 and in this case adhesion was due primarily to cell-surface proteoglycan and not integrin binding. (C) 2001 Elsevier Science B.V./International Society of Matrix Biology. All rights reserved.

L25 ANSWER 6 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 1997:682305 SCISEARCH
THE GENUINE ARTICLE: XV690
TITLE: The alpha(4)beta(1) integrin can mediate leukocyte adhesion to casein and denatured protein substrates
AUTHOR: Davis G E (Reprint); Thomas J S; Madden S
CORPORATE SOURCE: TEXAS A&M UNIV, HLTH SCI CTR, DEPT PATHOL, 208 REYNOLDS MED BLDG, COLLEGE STN, TX 77843 (Reprint)
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF LEUKOCYTE BIOLOGY, (SEP 1997) Vol. 62, No. 3, pp. 318-328.
ISSN: 0741-5400.
PUBLISHER: FEDERATION AMER SOC EXP BIOL, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814-3998.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 56
ENTRY DATE: Entered STN: 1997
Last Updated on STN: 1997

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB An understanding of the binding specificity of leukocyte integrins is important to determine the range of ligands that interact with these receptors during inflammatory processes. In this study we show that the alpha(4) beta(1) integrin can interact with casein and denatured albumin and promote leukocyte adhesion through these interactions. This was demonstrated with the use of blocking antibodies directed to alpha(4) beta(1) and peptide adhesion competitors containing the alpha(4) beta(1) binding tripeptide, Leu-Asp-Val (LDV). Consistent with this data, the adhesion is completely divalent cation-dependent and is stimulated by known activators of leukocyte integrin function, namely phorbol ester and the beta(1) integrin activating antibody, 8A2. It is interesting to note that neither bovine alpha-casein or human albumin contain an LDV site (present in the CS-1 site of alternatively spliced fibronectin) or an IDS site (present in VCAM-1) yet they promote adhesion through this integrin. Furthermore, alpha(4) beta(1) directly binds to Sepharose columns containing casein, casein fragments, or denatured albumin but does not bind columns containing native albumin. These data suggest that the binding specificity for the alpha(4) beta(1) integrin is considerably broader than previously realized. This work has implications for how subsets of leukocytes may interact with damaged proteins during tissue injury and inflammation.

L25 ANSWER 7 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1997:897620 SCISEARCH
THE GENUINE ARTICLE: YJ526
TITLE: The expression of tenascin-C with the AD1 variable repeat in embryonic tissues, cell lines and tumors in various vertebrate species
AUTHOR: Derr L B (Reprint); ChiquetEhrismann R; GandourEdwards R; Spence J; Tucker R P
CORPORATE SOURCE: UNIV CALIF DAVIS, DEPT CELL BIOL & HUMAN ANAT, DAVIS, CA 95616; BOWMAN GRAY SCH MED, DEPT ANAT & NEUROBIOL, WINSTON SALEM, NC 27510; BOWMAN GRAY SCH MED, DEPT DERMATOL, WINSTON SALEM, NC 27510; FRIEDRICH MIESCHER INST, CH-4002 BASEL, SWITZERLAND; UNIV CALIF DAVIS, DEPT MED PATHOL, DAVIS, CA 95616
COUNTRY OF AUTHOR: USA; SWITZERLAND
SOURCE: DIFFERENTIATION, (NOV 1997) Vol. 62, No. 2, pp. 71-82. ISSN: 0301-4681.
PUBLISHER: SPRINGER VERLAG, 175 FIFTH AVE, NEW YORK, NY 10010.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 39
ENTRY DATE: Entered STN: 1997
Last Updated on STN: 1997

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Tenascin-C is a modular glycoprotein composed of domains of amino acid repeats. All forms of tenascin-C have eight constant fibronectin type III repeats, but additional fibronectin type LU repeats can be spliced into a variable domain found between the fifth and sixth constant repeats. Four extra repeats, named A, B, C and D, have been examined previously. Here, we have used in situ hybridization to determine the tissue origins of the navel AD1 and AD2 repeats. In the embryonic-day-10 chicken embryo, transcripts encoding the AD2 repeat are limited to the tips of lung bronchioles and the base of feather buds. In contrast the AD1 hybridization signal was widespread. Quantitative in situ hybridization reveals AD1-containing transcripts represent up to 85% of the total tenascin-C mRNA in some tissues (developing bone), and are undetectable in others (e.g. radial glia). Avian and human tumor cell

lines were examined for the expression of the ADI repeat using the reverse transcriptase polymerase chain-reaction (RT-PCR). Transcripts encoding six different tenascin-C splice variants incorporating the ADI repeat were found in the fibrosarcoma cell line, QT6. Many human tumor cells, including malignant melanoma and ductal breast carcinoma, were positive for AD1 tenascin-C expression. In addition, we found evidence of AD1 tenascin-C expression in samples of excised human tumors. Our results show that a novel variant may be a major part of the tenascin-C of the embryonic extracellular matrix, and may also be found in the stroma surrounding some human tumors.

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ACCESSION NUMBER: 1996:139319 SCISEARCH
THE GENUINE ARTICLE: TW039
TITLE: Attachment, invasion, chemotaxis, and proteinase expression of B16-BL6 melanoma cells exhibiting a low metastatic phenotype after exposure to dietary restriction of tyrosine and phenylalanine
AUTHOR: Uhlenkott C E (Reprint); Huijzer J C; Cardeiro D J; Elstad C A; Meadows G G
CORPORATE SOURCE: WASHINGTON STATE UNIV, COLL PHARM, DEPT PHARMACEUT SCI, PULLMAN, WA 99164; WASHINGTON STATE UNIV, COLL PHARM, PHARMACOL TOXICOL GRAD PROGRAM, PULLMAN, WA 99164
COUNTRY OF AUTHOR: USA
SOURCE: CLINICAL & EXPERIMENTAL METASTASIS, (MAR 1996) Vol. 14, No. 2, pp. 125-137.
ISSN: 0262-0898.
PUBLISHER: RAPID SCIENCE PUBLISHERS, 2-6 BOUNDARY ROW, LONDON, ENGLAND SE1 8NH.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 64
ENTRY DATE: Entered STN: 1996
Last Updated on STN: 1996

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We previously reported that low levels of tyrosine (Tyr) and phenylalanine (Phe) alter the metastatic phenotype of B16-BL6 (BL6) murine melanoma and select for tumor cell populations with decreased lung colonizing ability. To more specifically characterize the effects of Tyr and Phe restriction on the malignant phenotype of BL6, we investigated in vitro attachment, invasion, proteinase expression, and chemotaxis of high and low metastatic BL6 variants. High metastatic variant cells were isolated from subcutaneous tumors of mice fed a nutritionally complete diet (ND cells) and low metastatic variant cells were isolated from mice fed a diet restricted in Tyr and Phe (LTP cells). Results indicate that attachment to reconstituted basement membrane (Matrigel(TM)) was significantly reduced in LTP cells as compared to ND cells. Attachment to collagen IV, laminin, and fibronectin were similar between the two variants. Invasion through Matrigel(TM) and growth factor-reduced Matrigel(TM) were significantly decreased in LTP cells as compared to ND cells. Zymography revealed the presence of M(r). 92 000 and M(r) 72 000 progelatinases, tissue plasminogen activator, and urokinase plasminogen activator in the conditioned medium of both variants; however, there were no differences in activity of these secreted proteinases between the two variants. Growth of the variants on growth factor-reduced Matrigel(TM) similarly induced expression of the M(r) 92 000 progelatinase. The variants exhibited similar chemotactic responses toward laminin. However, the chemotactic response toward fibronectin by LTP cells was significantly increased. MFR5, a monoclonal antibody which selectively blocks function of the alpha(5) chain of the alpha(5) beta(1)

integrin, VLA-5, decreased the chemotactic response toward fibronectin of ND cells by 37%; the chemotactic response by LTP cells was reduced by 49%. This effect was specific for fibronectin-mediated chemotaxis since the chemotaxis toward laminin and invasion through Matrigel(TM) were not altered by the presence of MFR5. The surface expression of VLA-5 was significantly increased in LTP cells as compared to ND cells by flow cytometric analysis. These observations suggest that limitation of Tyr and Phe either directly modifies BL6 or selects for subpopulations with altered in vitro invasion, chemotaxis, and integrin expression.

L25 ANSWER 9 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1994:780300 SCISEARCH
THE GENUINE ARTICLE: PV771
TITLE: INTEGRIN ALPHA(4)BETA(1)-MEDIATED MELANOMA CELL-ADHESION AND MIGRATION ON VASCULAR CELL-ADHESION MOLECULE-1 (VCAM-1) AND THE ALTERNATIVELY SPLICED IIICS REGION OF FIBRONECTIN
AUTHOR: MOULD A P (Reprint); ASKARI J A; CRAIG S E; GARRATT A N; CLEMENTS J; HUMPHRIES M J
CORPORATE SOURCE: UNIV MANCHESTER, SCH BIOL SCI, MANCHESTER M13 9PT, LANCS, ENGLAND (Reprint); BRITISH BIOTECHNOL LTD, OXFORD OX4 5LY, ENGLAND
COUNTRY OF AUTHOR: ENGLAND
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (4 NOV 1994) Vol. 269, No. 44, pp. 27224-27230.
ISSN: 0021-9258.
PUBLISHER: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 71
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The integrin receptor alpha(4) beta(1) (also known as VLA-4) binds two different ligands, the endothelial cell surface protein vascular cell adhesion molecule-1 (VCAM-1) and the extracellular matrix component fibronectin. Three distinct sites in fibronectin are recognized by alpha(4) beta(1). Two of these (represented by peptides CS1 and CS5) are present in the alternatively spliced IIICS region and lie in separate, independently spliced segments of this region. A third site resides in the adjacent constitutively expressed HepII domain. Recombinant proteins containing the HepII domain and different splice variants of the IIICS have been generated and compared for their ability to mediate cell attachment, spreading and migration. The activity of these proteins has also been compared with that of a recombinant soluble form of VCAM-1 (rsVCAM-1).

All the recombinant proteins supported A375-SM human melanoma cell attachment and spreading in an alpha(4) beta(1)-dependent manner, but had varied adhesive activities with rsVCAM-1 > fibronectin variants containing the CS1 sequence >> other fibronectin variants. Low concentrations of rsVCAM-1 and CS1-containing fibronectin variants effectively supported cell migration in a trans-filter assay; however, cell motility was retarded at high concentrations of the same proteins. Fibronectin variants lacking CS1 supported little or no migration.

To obtain further insight into the molecular basis of this varied adhesive activity apparent dissociation constants for each of the recombinant proteins were measured using a solid phase receptor-ligand binding assay. The results revealed a hierarchy of ligand affinities that

mirrored their adhesive activity (rsVCAM-1 > fibronectin variants containing CS1 >> other fibronectin variants).

L25 ANSWER 10 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 1993:492417 SCISEARCH
THE GENUINE ARTICLE: LQ457
TITLE: MODULATING THE METASTATIC POTENTIAL OF MURINE RAW117 LARGE-CELL LYMPHOMA-CELLS BY SELECTION FOR RESISTANCE TO INTERFERON-GAMMA
AUTHOR: LABICHE R A (Reprint); NICOLSON G L
CORPORATE SOURCE: UNIV TEXAS, MD ANDERSON CANC CTR, DEPT TUMOR BIOL, HOUSTON, TX 77030
COUNTRY OF AUTHOR: USA
SOURCE: INTERNATIONAL JOURNAL OF CANCER, (30 JUL 1993) Vol. 54, No. 6, pp. 1002-1009.
ISSN: 0020-7136.
PUBLISHER: WILEY-LISS, DIV JOHN WILEY & SONS INC, 111 RIVER ST, HOBOKEN, NJ 07030 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 32
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Highly metastatic, in vivo-selected cells of RAW117-H10 large-cell lymphoma have been shown to be more resistant than poorly metastatic parental RAW117-P cells to the cytolytic and cytostatic activities of activated macrophages in co-culture experiments. Activated macrophages are known to produce soluble, cytostatic respiration-inhibiting factors, and such activities can be duplicated by interferon-gamma (IFN-gama) or by combinations of IFN-gamma and Escherichia coli lipopolysaccharide (LPS). Highly metastatic RAW117-H10 cells are more resistant to the cytostatic effects of IFN-gamma and LPS than poorly metastatic RAW117-P cells, and short-term (up to 72 hr) treatment with IFN-gamma and LPS does not change the metastatic potentials of RAW117 cells. We have studied the effects of sequential selection of RAW117-P cells for increased resistance to IFN-gamma and LPS. After 7 to 13 sequential selections, the resulting variant lines were completely refractory to the growth-inhibitory effects of IFN-gamma and LPS and cross-tolerant to macrophage-conditioned medium. The selected variants also completely lost their experimental metastatic potentials and their tumorigenicities after s.c. or i.m. injection. Cytofluorographic analysis indicated reduced cell-surface expression of H-2K(d) antigen and fibronectin receptor on the variant cells but no change in surface mu heavy-chain immunoglobulin. The IFN-gamma-selected lines were less adhesive to liver microvascular endothelial cells than the unselected RAW117 cell lines, but were equally sensitive to NK cytolysis by spleen cells. Our results suggest that exposure to certain cytokines can affect the growth and metastatic potential of RAW117 cells and result in the selection of resistant variants with altered biologic properties. (C) 1993 Wiley-Liss, Inc.

L25 ANSWER 11 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 1993:701604 SCISEARCH
THE GENUINE ARTICLE: MH071
TITLE: SELECTION FOR ENHANCED ADHESION TO MICROVESSEL ENDOTHELIAL-CELLS OR RESISTANCE TO INTERFERON-GAMMA MODULATES THE METASTATIC POTENTIAL OF MURINE RAW117 LARGE-CELL LYMPHOMA-CELLS
AUTHOR: LABICHE R A (Reprint); TRESSLER R J; NICOLSON G L

CORPORATE SOURCE: UNIV TEXAS, MD ANDERSON CANC CTR, DEPT TUMOR BIOL, HOUSTON, TX 77030
COUNTRY OF AUTHOR: USA
SOURCE: CLINICAL & EXPERIMENTAL METASTASIS, (NOV 1993) Vol. 11, No. 6, pp. 472-481.
ISSN: 0262-0898.
PUBLISHER: RAPID SCIENCE PUBLISHERS, 2-6 BOUNDARY ROW, LONDON, ENGLAND SE1 8NH.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 37
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Poorly liver metastatic large-cell lymphoma RAW117-P cells were sequentially selected in vitro for increased adhesion to murine hepatic sinusoidal endothelial cells. After three or four sequential selections, the selected sublines showed increased rates of adhesion to target hepatic microvessel endothelial cells and increased formation of experimental metastases in the liver. However, the endothelial cell adhesion-selected RAW117 sublines were generally unstable and gradually lost their enhanced adhesive and metastatic properties during passage in culture. Highly metastatic, liver-selected RAW117-H10 large-cell lymphoma cells were more resistant to the cytostatic effects of interferon-gamma (IFN-gamma) than poorly metastatic unselected parental RAW117-P cells. When tested for their sensitivity to IFN-gamma, the endothelial cell adhesion variants were significantly more resistant than the unselected RAW117-P cells, but after a 72-h treatment with IFN-gamma, the in vitro-selected cells lost their enhanced endothelial cell adhesion characteristics, their potential to colonize the liver, and their ability to grow when injected at subcutaneous or intramuscular sites. In contrast, the metastatic potential of similarly treated RAW117-P cells was unaffected by IFN-gamma during a 72-h treatment. Sequential selection of RAW117-P cells for increased resistance to IFN-gamma in vitro resulted in variant lines that were refractory to the growth-inhibiting effects of IFN-gamma, and these IFN-gamma-selected variants were also less adhesive to liver microvessel endothelial cells. The IFN-gamma-selected variants also lost their experimental metastatic potentials completely anti their tumorigenicities at sites of subcutaneous or intramuscular injection. Cytofluorographic analysis indicated reduced cell surface expression of H-2K(d) antigen and fibronectin receptor on the selected variant cells but no change ire cell surface mu heavy chain immunoglobulin. The unselected and selected RAW117 lines had similar sensitivities to natural killer (NK) cell-mediated cytolysis, indicating that the in vivo differences were probably not due to differences in NK cell-mediated cytolysis. The results suggest that selection for adhesion to organ microvessel endothelial cells or sequential exposure to certain cytokines can affect the adhesive, growth and metastatic properties of RAW117 cells without modifying their responses to NK cells.

L25 ANSWER 12 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 1993:605675 SCISEARCH
THE GENUINE ARTICLE: LZ700
TITLE: SPECIFIC ALTERATIONS IN THE EXPRESSION OF ALPHA-3-BETA-1 AND ALPHA-6-BETA-4 INTEGRINS IN HIGHLY INVASIVE AND METASTATIC VARIANTS OF HUMAN PROSTATE CARCINOMA-CELLS SELECTED BY IN-VITRO INVASION THROUGH RECONSTITUTED BASEMENT-MEMBRANE
AUTHOR: DEDHAR S (Reprint); SAULNIER R; NAGLE R; OVERALL C M
CORPORATE SOURCE: SUNNYBROOK HLTH SCI CTR, DIV CANC RES, REICHMANN RES BLDG

S-218, 2075 BAYVIEW AVE, TORONTO M4N 3M5, ON, CANADA (Reprint); UNIV TORONTO, DEPT MED BIOPHYS, TORONTO M5S 1A1, ONTARIO, CANADA; UNIV BRITISH COLUMBIA, DEPT PATHOL, VANCOUVER V6T 1W5, BC, CANADA; UNIV ARIZONA, HLTH SCI CTR, DEPT PATHOL, TUCSON, AZ 85721; UNIV BRITISH COLUMBIA, FAC DENT, VANCOUVER V6T 1W5, BC, CANADA

COUNTRY OF AUTHOR: CANADA; USA
SOURCE: CLINICAL & EXPERIMENTAL METASTASIS, (SEP 1993) Vol. 11, No. 5, pp. 391-400.
ISSN: 0262-0898.
PUBLISHER: RAPID SCIENCE PUBLISHERS, 2-6 BOUNDARY ROW, LONDON, ENGLAND SE1 8NH.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 31
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Highly invasive cell subpopulations from a human prostate carcinoma cell line, PC-3, were selected for by allowing the parental PC-3 cells to invade through reconstituted basement membrane, Matrigel. These cells were collected, cultured and then selected further by repeated invasion through the in vitro invasion chamber. The invasive subpopulations (I-PC3 (2) and (3)) were found to be approximately 15-fold more invasive in vitro than the parental cells, had a distinct rounded morphology in culture, and proliferated more rapidly than the parental cells. When injected either subcutaneously or intraperitoneally into immunocompromised SCID mice, the I-PC3 cells were found to form tumors at the primary sites and to be highly invasive and metastatic. In contrast, the parental PC-3 cells formed tumors at the site of inoculation in these mice but failed to invade or metastasize. The I-PC3 cells attached equally as well as PC-3 cells to fibronectin, laminin, collagen type IV and vitronectin, but unlike the parental PC-3 cells these invasive variants failed to spread on any of these substrates. On Matrigel, the PC-3 cells became highly organized, whereas the I-PC3 cells remained rounded, clumped together and penetrated into the Matrigel. Biochemical analysis of the expression of adhesion proteins and integrins demonstrated that whereas the parental cells synthesized and secreted substantial amounts of fibronectin , the I-PC3 cell variants did not secrete any fibronectin. Although both PC-3 and I-PC3 cells expressed equivalent levels of cell surface alphavbeta3, alpha2beta1 and alpha5beta1 integrins, the expression of the alpha3beta1 integrin, which is expressed at very high levels on the parental PC-3 cells, was drastically reduced on the invasive I-PC3 cells. This decrease in expression of alpha3 occurred also at the level of mRNA expression. Finally, whereas the PC-3 cells express alpha6beta1, in the invasive I-PC3 cells the alpha6 subunit was associated mostly with the beta4 subunit. Since the alpha6beta4 integrin is analogous to the A9 tumor antigen which is associated with aggressive human squamous cell carcinomas, the apparent overexpression of alpha6beta4 may also participate in the aggressive behavior of these variant prostate carcinoma cells. Alterations in the expression of the alpha3beta1 and alpha6beta4 integrins may thus allow these cells to become more invasive, and lead to an increased propensity for metastasis.

L25 ANSWER 13 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1992:405948 SCISEARCH
THE GENUINE ARTICLE: JB570

TITLE: EXPRESSION AND LIGAND-BINDING FUNCTION OF THE INTEGRIN-ALPHA-4-BETA-1 (VLA-4) ON NEURAL-CREST-DERIVED TUMOR-CELL LINES

AUTHOR: BEDNARCZYK J L (Reprint); MCINTYRE B W
CORPORATE SOURCE: UNIV TEXAS, MD ANDERSON CANC CTR, DEPT IMMUNOL, BOX 178, 1515 HOLCOMBE BLVD, HOUSTON, TX 77030
COUNTRY OF AUTHOR: USA
SOURCE: CLINICAL & EXPERIMENTAL METASTASIS, (JUL 1992) Vol. 10, No. 4, pp. 281-290.
ISSN: 0262-0898.
PUBLISHER: RAPID SCIENCE PUBLISHERS, 2-6 BOUNDARY ROW, LONDON, ENGLAND SE1 8NH.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 60
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Human neural-crest-derived tumor cell lines, including three neuroblastomas, an astrocytoma, a glioblastoma, a rhabdomyosarcoma and a melanoma were screened for the expression of the integrin alpha-4-beta-1 (VLA-4). The neuroblastomas IMR-32 and SK-N-SH, the astrocytoma 131-INI, the glioblastoma Fogerty and the rhabdomyosarcoma TE-671 expressed alpha-4-beta-1 as determined by cytofluorometry and immunoprecipitation. Another neuroblastoma line, LA-N-1, did not express alpha-4-beta-1. Analysis of immunoprecipitated alpha-4-beta-1 showed that the alpha-4 subunit from the various cell types differed in relative molecular weight (M(r)). The variability in the observed M(r) could be accounted for by differences in the levels of N-linked glycosylation. The observed variability in M(r) did not appear to affect function since intact cells and solubilized alpha-4-beta-1 bound to a synthetic peptide identical in sequence to the CS-1 region of the alternatively spliced IIICS domain of fibronectin, a known alpha-4-beta-1 ligand.

L25 ANSWER 14 OF 14 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
ACCESSION NUMBER: 1991:10937 SCISEARCH
THE GENUINE ARTICLE: EP243
TITLE: ALTERNATIVE SPLICING OF ENDOTHELIAL-CELL FIBRONECTIN MESSENGER-RNA IN THE IIICS REGION - FUNCTIONAL-SIGNIFICANCE
AUTHOR: KOCHER O (Reprint); KENNEDY S P; MADRI J A
CORPORATE SOURCE: YALE UNIV, SCH MED, DEPT PATHOL, 310 CEDAR ST, NEW HAVEN, CT 06510
COUNTRY OF AUTHOR: USA
SOURCE: AMERICAN JOURNAL OF PATHOLOGY, (DEC 1990) Vol. 137, No. 6, pp. 1509-1524.
ISSN: 0002-9440.
PUBLISHER: AMER SOC INVESTIGATIVE PATHOLOGY, INC, 428 EAST PRESTON ST, BALTIMORE, MD 21202-3993.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 57
ENTRY DATE: Entered STN: 1994
Last Updated on STN: 1994
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Transforming growth factor-beta-1 (TGF-beta-1) is thought to play a role in modulating vascular cell function in vivo. In vitro, it decreases endothelial cell proliferation and migration. We postulated that these biologic activities could be mediated through TGF-beta-1 modulation of specific gene expression. Therefore we differentially screened a human umbilical vein endothelial cell cDNA library with cDNAs prepared from both

untreated and TGF-beta-1-treated bovine aortic endothelial cells. Using this technique, we isolated many TGF-beta-1-induced cDNA clones. Sequence analysis of these cDNAs showed that many of them corresponded to alternatively spliced fibronectin mRNAs. These fibronectin clones all contained the extradomain I (ED I) but three different forms of the type III connecting segment (IIICS). These different fibronectin cDNAs were expressed in bacteria and the recombinant proteins used to study the effects of IIICS alternative splicing on cell attachment, spreading, and migration in bovine aortic endothelial and smooth muscle cells and B16F10 melanoma cells. The results of these experiments show that attachment and spreading of bovine aortic endothelial and smooth muscle cells depend primarily on the presence of the Arg-Gly-Asp-Ser (RGDS) sequence in the recombinant fibronectin proteins. However attachment and spreading of bovine aortic endothelial cells are modulated by alternative splicing in the IIICS region. Specifically splicing of the IIICS region decreases spreading and increases migration rates of the endothelial cells. On the contrary, using a cell line (B16F10 melanoma cells) that is known not to require the RGDS sequence for adhesion confirmed previous findings that B16F10 melanoma cells do not require the presence of the RGDS sequence for attachment and spreading. Indeed B16F10 cells were able to attach and spread on two recombinant proteins that did not contain the RGDS sequence. However attachment and spreading of B16F10 were dramatically inhibited when a 75-base pair DNA fragment was removed from the 5 end of the IIICS region. These results suggest that various regions of the fibronectin molecule may be able to interact with different cell populations to promote cell attachment and spreading, and that alternative splicing may modulate this process.

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 NEWS 26  DEC 17  MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
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 NEWS 31  JAN 28  USPATFULL, USPAT2, and USPATOLD enhanced with new
                  custom IPC display formats
 NEWS 32  JAN 28  MARPAT searching enhanced
 NEWS 33  JAN 28  USGENE now provides USPTO sequence data within 3 days
                  of publication
 NEWS 34  JAN 28  TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS 35  JAN 28  MEDLINE and LMEDLINE reloaded with enhancements

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L2       25513 (GUO, Y?)/AU

=> s (Ma, J?)/au
L3       26479 (MA, J?)/AU

=> s l2 or l3
L4       51415 L2 OR L3

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L5          53 L1 AND L4

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L6           19 DUP REM L5 (34 DUPLICATES REMOVED)

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L6   ANSWER 1 OF 19     MEDLINE on STN                  DUPLICATE 1
ACCESSION NUMBER:   2007579366     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 17431617
TITLE:              Treatment of hepatocellular carcinoma in a mouse xenograft
                    model with an immunotoxin which is engineered to eliminate
                    vascular leak syndrome.
AUTHOR:             Wang Hao; Song Shuichuan; Kou Geng; Li Bohua; Zhang Dapeng;
                    Hou Sheng; Qian Weizhu; Dai Jianxin; Tian Liang; Zhao Jian;
                    Guo Yajun
CORPORATE SOURCE:   International Joint Cancer Institute, Second Military
                    Medical University, Shanghai, PR China.
SOURCE:             Cancer immunology, immunotherapy : CII, (2007 Nov) Vol. 56,
                    No. 11, pp. 1775-83.  Electronic Publication: 2007-04-13.
                    Journal code: 8605732. ISSN: 0340-7004.
PUB. COUNTRY:       Germany: Germany, Federal Republic of
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
                    (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE:           English
FILE SEGMENT:       Priority Journals
ENTRY MONTH:        200710
ENTRY DATE:         Entered STN: 2 Oct 2007
                    Last Updated on STN: 26 Oct 2007
                    Entered Medline: 25 Oct 2007
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AB Vascular leak syndrome (VLS) is the major dose-limiting toxicity of immunotoxin and interleukin-2 therapy. It has been evidenced that VLS-inducing molecules share a three-amino acid consensus motif, (x)D(y), which may be responsible for initiating VLS. Here we have constructed a recombinant immunotoxin (SMFv-PE38KDEL) by genetically fusing PE38KDEL to a single-chain antibody derived from SM5-1 monoclonal antibody, which has a high specificity for melanoma, hepatocellular carcinoma and breast cancer. In order to eliminate VLS induced by this PE38KDEL-based immunotoxin, a panel of mutants were generated by changing amino acid residues adjacent to its three (x)D(y) motifs in the three-dimensional structure. One of the SMFv-PE38KDEL mutants, denoted as

mut1, displayed a similar protein synthesis inhibitory in a reticulocyte lysate translation assay compared to the wild-type SMFv-PE38KDEL (wt). The in vitro cytotoxicity assay indicated that mut1 specifically killed SM5-1 binding protein-positive tumor cells, although its cytotoxicity was slightly less than weight In contrast, mut1 was shown to be much weaker in inducing VLS in mice than weight The LD(50) values of wt and mut1 in mice were investigated with the result that the LD(50) of mut1 was about tenfold higher than that of weight The in vivo antitumor activity of wt and mut1 were also compared in tumor-bearing nude mice. Both wt and mut1 were effective in inhibiting the tumor growth but mut1 showed improved therapeutic efficacy. These studies suggest mut1 may be a novel PE-based immunotoxin with much less toxicity for clinical use.

L6 ANSWER 2 OF 19 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2007344404 MEDLINE
DOCUMENT NUMBER: PubMed ID: 17451647
TITLE: Construction and characterization of a high-affinity humanized SM5-1 monoclonal antibody.
AUTHOR: Li Bohua; Wang Hao; Zhang Dapeng; Qian Weizhu; Hou Sheng; Shi Shu; Zhao Lei; Kou Geng; Cao Zhiguo; Dai Jianxin; Guo Yajun
CORPORATE SOURCE: International Joint Cancer Institute, Second Military Medical University, 800 Xiangyin Road, Shanghai 200433, People's Republic of China.
SOURCE: Biochemical and biophysical research communications, (2007 Jun 15) Vol. 357, No. 4, pp. 951-6. Electronic Publication: 2007-04-17.
Journal code: 0372516. ISSN: 0006-291X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200707
ENTRY DATE: Entered STN: 12 Jun 2007
Last Updated on STN: 10 Jul 2007
Entered Medline: 9 Jul 2007
AB SM5-1 is a mouse monoclonal antibody which has a high specificity for melanoma, hepatocellular carcinoma, and breast cancer, making it a promising candidate for cancer targeting therapy. We have therefore attempted to construct a humanized antibody of SM5-1 to minimize its immunogenicity for potential clinical use. Using a molecular model of SM5-1 built by computer-assisted homology modeling, framework region (FR) residues of potential importance to the antigen binding were identified. Then, a humanized version of SM5-1 was generated by transferring these mouse key FR residues onto a human framework that was selected based on homology to the mouse framework, together with the mouse complementarity-determining region (CDR) residues. This humanized antibody retained only six murine residues outside of the CDRs but was shown to possess affinity and specificity comparable to that of the parental antibody, suggesting that it might have the potential to be developed for future clinical use.

L6 ANSWER 3 OF 19 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2007605365 MEDLINE
DOCUMENT NUMBER: PubMed ID: 17927907
TITLE: Preparation and Characterization of Paclitaxel-loaded PLGA nanoparticles coated with cationic SM5-1 single-chain antibody.
AUTHOR: Kou Geng; Gao Jie; Wang Hao; Chen Huaiwen; Li Bohua; Zhang Dapeng; Wang Shuhui; Hou Sheng; Qian Weizhu; Dai Jianxin;

Zhong Yanqiang; Guo Yajun
CORPORATE SOURCE: International Joint Cancer Institute and College of Pharmacy, Second Military Medical University, New Library Building West 10th-11th Floor, 800 Xiang Yin Road, Shanghai 200433, People's Republic of China.
SOURCE: Journal of biochemistry and molecular biology, (2007 Sep 30) Vol. 40, No. 5, pp. 731-9.
Journal code: 9702084. ISSN: 1225-8687.
PUB. COUNTRY: Korea (South)
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200801
ENTRY DATE: Entered STN: 12 Oct 2007
Last Updated on STN: 12 Jan 2008
Entered Medline: 11 Jan 2008

AB The purpose of this study was to develop paclitaxel-loaded poly(lactide-co-glycolide) (PLGA) nanoparticles coated with cationic SM5-1 single-chain antibody (scFv) containing a polylysine (SMFv-polylys). SM5-1 scFv (SMFv) is derived from SM5-1 monoclonal antibody, which binds to a 230 kDa membrane protein specifically expressed on melanoma, hepatocellular carcinoma and breast cancer cells. SMFv-polylys was expressed in Escherichia coli and purified by cation-exchange chromatography. Purified SMFv-polylys was fixed to paclitaxel-loaded PLGA nanoparticles to form paclitaxel-loaded PLGA nanoparticles coated with SMFv-polylys (Ptx-NP-S). Ptx-NP-S was shown to retain the specific antigen-binding affinity of SMFv-polylys to SM5-1 binding protein-positive Ch-hep-3 cells. Finally, the cytotoxicity of Ptx-NP-S was evaluated by a non-radioactive cell proliferation assay. It was demonstrated that Ptx-NP-S had significantly enhanced in vitro cytotoxicity against Ch-hep-3 cells as compared with non-targeted paclitaxel-loaded PLGA nanoparticles. In conclusion, our results suggest that cationic SMFv-polylys has been successfully generated and may be used as targeted ligand for preparing cancer-targeted nanoparticles.

L6 ANSWER 4 OF 19 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2008078905 IN-PROCESS
DOCUMENT NUMBER: PubMed ID: 17959303
TITLE: A chimeric SM5-1 antibody inhibits hepatocellular carcinoma cell growth and induces caspase-dependent apoptosis.
AUTHOR: Dai Jianxin; Jin Jun; Li Bohua; Wang Hao; Hou Sheng; Qian Weizhu; Kou Geng; Zhang Dapeng; Li Jing; Tan Min; Ma Jing; Guo Yajun
CORPORATE SOURCE: International Joint Cancer Institute, Second Military Medical University, Shanghai 200433, People's Republic of China.
SOURCE: Cancer letters, (2007 Dec 18) Vol. 258, No. 2, pp. 208-14.
Electronic Publication: 2007-10-23.
Journal code: 7600053. ISSN: 0304-3835.
PUB. COUNTRY: Ireland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: NONMEDLINE; IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 2 Feb 2008
Last Updated on STN: 2 Feb 2008

AB cSM5-1 is a mouse-human chimeric antibody which has a high specificity for hepatocellular carcinoma, melanoma and breast cancer. In this study, cSM5-1 was found to be able to inhibit cell growth and induce apoptosis in

hepatocellular carcinoma cells. The antitumor activity of cSM5-1 was closely correlated with the expression level of the SM5-1 binding protein in the cancer cells. The role of caspases in cSM5-1-induced apoptosis was also investigated, indicating that cSM5-1-induced apoptosis was partially caspase-dependent and caspase-10 played a critical role. These in vitro data indicate that cSM5-1 has the potential to be a promising candidate for cancer treatment.

L6 ANSWER 5 OF 19 BIOTECHDS COPYRIGHT 2008 THE THOMSON CORP. on STN
DUPLICATE 5
ACCESSION NUMBER: 2007-12387 BIOTECHDS
TITLE: High efficiency low poison immune toxin and its preparation method and application;
involving production of a monoclonal antibody, PE38KDEL immunotoxin composition, useful for an immunotherapy application
AUTHOR: GUO Y
PATENT ASSIGNEE: GUO Y
PATENT INFO: CN 1869070 29 Nov 2006
APPLICATION INFO: CN 2005-26247 27 May 2005
PRIORITY INFO: CN 2005-10026247 27 May 2005; CN 2005-10026247 27 May 2005
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
OTHER SOURCE: WPI: 2007-344796 [33]
AN 2007-12387 BIOTECHDS
AB DERWENT ABSTRACT:
NOVELTY - A separated polypeptide which contains the single-chain antibody ScFv of human monoclonal antibody SM5-1 taken from rat and the immunotoxin PE38KDEL coupled with said ScFv or the mutant whose amino acids at the sites No.293,297,328,416,417,421,576,578 and 579 are mutated, the DNA molecule coding said polypeptide, the expression carrier and host cell containing said DNA molecule, its preparing process and application, and the medicinal composition containing said polypeptide are disclosed.

L6 ANSWER 6 OF 19 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 2006279257 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16567969
TITLE: Concordant loss of melanoma differentiation antigens in synchronous and asynchronous melanoma metastases: implications for immunotherapy.
AUTHOR: Trefzer Uwe; Hofmann Maja; Reinke Susanne; Guo Ya-Jun; Audring Heike; Spagnoli Giulio; Sterry Wolfram
CORPORATE SOURCE: Department of Dermatology and Allergy, Skin Cancer Centre, Charite-Universitatsmedizin Berlin, Berlin, Germany.. uwe.trefzer@charite.de
SOURCE: Melanoma research, (2006 Apr) Vol. 16, No. 2, pp. 137-45. Journal code: 9109623. ISSN: 0960-8931.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200607
ENTRY DATE: Entered STN: 23 May 2006
Last Updated on STN: 15 Jul 2006
Entered Medline: 14 Jul 2006
AB Because of its known heterogeneity, the analysis of antigen expression is crucial prior to the initiation of antigen-specific immunotherapy for melanoma. The melanoma differentiation antigens gp100, MART-1 and tyrosinase are involved in a common pathway of melanin synthesis. Peptides derived from these melanoma differentiation antigens are used in

the immunotherapy of melanoma and antibodies recognizing these antigens are commonly applied to detect melanocytic lesions. One hundred and ninety-one paraffin-embedded melanoma metastases from 28 patients with 2-19 lesions (mean, 6.8) developing synchronously (n = 67) or asynchronously (n = 124) were analysed by immunohistochemistry for the expression of the melanoma differentiation antigens, as well as cancer/testis antigens of the melanoma antigen-A (MAGE-A) family (monoclonal antibodies 77B and 57B), anti-S100 and SM5-1 . The overall reactivities were 81.6% (gp100), 79.5% (MART-1), 59.6% (tyrosinase), 59.1% (77B), 60.7% (57B), 93.2% (S100) and 91.6% (SM5-1). Twenty-seven lesions (14.1%) were positive for all tumour-associated antigens, 75 lesions (39.2%) were negative for one antigen and 87 lesions (45.5%) were negative for several tumour-associated antigens. Co-ordinated loss was found for lesions negative for gp100 and MART-1 (9.4%, P < 0.0005), gp100 and tyrosinase (11.0%, P = 0.009), MART-1 and tyrosinase (15.2%, P < 0.0005) and gp100, MART-1 and tyrosinase (8.9%, P < 0.0005), which is up to six times higher than the expected calculated loss. This co-ordinated loss of melanoma differentiation antigens in melanoma did not include cancer testis antigens and S100 or SM5-1. On average, the melanoma differentiation antigens stained 50-65% of cells within a lesion, and 10-39% of synchronous clusters were heterogeneous for melanoma differentiation antigen expression. In conclusion, broader polypeptide vaccines should be used for melanoma immunotherapy.

L6 ANSWER 7 OF 19 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 2006050213 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16405722
TITLE: The monoclonal antibody SM5-1 recognizes a fibronectin variant which is widely expressed in melanoma.
AUTHOR: Trefzer Uwe; Chen Yingwen; Herberth Gunda; Hofmann Maja Ann; Kiecker Felix; Guo Yajun; Sterry Wolfram
CORPORATE SOURCE: Department of Dermatology and Allergy, Skin Cancer Center, Charite - Universitatsmedizin Berlin, Schumannstrasse 20/21, 10117 Berlin, Germany.. uwe.trefzer@charite.de
SOURCE: BMC cancer, (2006) Vol. 6, pp. 8. Electronic Publication: 2006-01-11.
Journal code: 100967800. E-ISSN: 1471-2407.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200602
ENTRY DATE: Entered STN: 27 Jan 2006
Last Updated on STN: 22 Feb 2006
Entered Medline: 21 Feb 2006
AB BACKGROUND: Previously we have generated the monoclonal antibody SM5-1 by using a subtractive immunization protocol of human melanoma. This antibody exhibits a high sensitivity for primary melanomas of 99% (248/250 tested) and for metastatic melanoma of 96% (146/151 tested) in paraffin embedded sections. This reactivity is superior to the one obtained by HMB-45, anti-MelanA or anti-Tyrosinase and is comparable to anti-S100. However, as compared to anti-S100, the antibody SM5-1 is highly specific for melanocytic lesions since 40 different neoplasms were found to be negative for SM5-1 by immunohistochemistry. The antigen recognized by SM5-1 is unknown. METHODS: In order to characterize the antigen recognized by mAb SM5-1, a cDNA library was constructed from the metastatic human melanoma cell line SMMUpos in the Uni-ZAP lambda phage and screened by mAb SM5-

1. The cDNA clones identified by this approach were then sequenced and subsequently analyzed. RESULTS: Sequence analysis of nine independent overlapping clones (length 3100-5600 bp) represent fibronectin cDNA including the ED-A, but not the ED-B region which are produced by alternative splicing. The 89aa splicing variant of the IIICS region was found in 8/9 clones and the 120aa splicing variant in 1/9 clones, both of which are included in the CS1 region of fibronectin being involved in melanoma cell adhesion and spreading. CONCLUSION: The molecule recognized by SM5-1 is a melanoma associated FN variant expressed by virtually all primary and metastatic melanomas and may play an important role in melanoma formation and progression. This antibody is therefore not only of value in immunohistochemistry, but potentially also for diagnostic imaging and immunotherapy.

L6 ANSWER 8 OF 19 EMBASE DUPLICATE 8

ACCESSION NUMBER: 2006067578 EMBASE

TITLE: The monoclonal antibody SM5-1 recognizes a fibronectin variant which is widely expressed in melanoma.

AUTHOR: Trefzer U.; Chen Y.; Herberth G.; Hofmann M.A.; Kiecker F.; Guo Y.; Sterry W.

CORPORATE SOURCE: U. Trefzer, Department of Dermatology and Allergy, Skin Cancer Center, Charite - Universitatsmedizin Berlin, Schumannstrasse 20/21, 10117 Berlin, Germany. uwe.trefzer@charite.de

SOURCE: BMC Cancer, (11 Jan 2006) Vol. 6. arn. 8.
Refs: 56
ISSN: 1471-2407 E-ISSN: 1471-2407 CODEN: BCMACL

COUNTRY: United Kingdom

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 016 Cancer
026 Immunology, Serology and Transplantation
029 Clinical and Experimental Biochemistry
037 Drug Literature Index
005 General Pathology and Pathological Anatomy

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 3 Mar 2006
Last Updated on STN: 3 Mar 2006

AB Background: Previously we have generated the monoclonal antibody SM5-I by using a subtractive immunization protocol of human melanoma. This antibody exhibits a high sensitivity for primary melanomas of 99% (248/250 tested) and for metastatic melanoma of 96% (146/151 tested) in paraffin embedded sections. This reactivity is superior to the one obtained by HMB-45, anti-MelanA or anti-Tyrosinase and is comparable to anti-S100. However, as compared to anti-S100, the antibody SM5-I is highly specific for melanocytic lesions since 40 different neoplasms were found to be negative for SM5-I by immunohistochemistry. The antigen recognized by SM5-I is unknown. Methods: In order to characterize the antigen recognized by mAb SM5-I, a cDNA library was constructed from the metastatic human melanoma cell line SMMUpos in the Uni-ZAP lambda phage and screened by mAb SM5-I. The cDNA clones identified by this approach were then sequenced and subsequently analyzed. Results: Sequence analysis of nine independent overlapping clones (length 3100-5600 bp) represent fibronectin cDNA including the ED-A, but not the ED-B region which are produced by alternative splicing. The 89aa splicing variant of the IIICS region was found in 8/9 clones and the 120aa splicing variant in 1/9 clones, both of which are included in the CSI region of fibronectin being involved in melanoma cell adhesion and spreading. Conclusion: The molecule recognized

by SM5-I is a melanoma a ssociated FN variant expressed by virtually all primary and metastatic melanomas and may play an important role in melanoma formation and progression. This antibody is therefore not only of value in immunohistochemistry, but potentially also for diagnostic imaging and immunotherapy. .COPYRGT. 2006 Trefzer et al; licensee BioMed Central Ltd.

L6 ANSWER 9 OF 19 BIOTECHDS COPYRIGHT 2008 THE THOMSON CORP. on STN
DUPLICATE 9
ACCESSION NUMBER: 2005-19340 BIOTECHDS
TITLE: New antibody competitively inhibiting immunospecific binding of a human SM5-1 specific monoclonal antibody to a SM5-1 target antigen, useful in treating malignancies such as melanoma, breast cancer or hepatocellular carcinoma;
plasmid-mediated gene transfer and expression in COS cell for humanized antibody production for use in cancer diagnosis and immunotherapy
AUTHOR: MA J; GUO Y
PATENT ASSIGNEE: SYMBIGENE ACQUISITION CO INC
PATENT INFO: WO 2005053604 16 Jun 2005
APPLICATION INFO: WO 2004-US17855 4 Jun 2004
PRIORITY INFO: TW 2003-133571 28 Nov 2003; CN 2003-129123 6 Jun 2003
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2005-435284 [44]
AN 2005-19340 BIOTECHDS
AB DERWENT ABSTRACT:
NOVELTY - An antibody that competitively inhibits the immunospecific binding of a human SM5-1 specific monoclonal antibody to a SM5-1 target antigen, where the variable region of heavy chain of the human SM5-1 specific monoclonal antibody comprises a fully defined sequence of 119 amino acids (SEQ ID NO: 1 or 9) and the variable region of light chain comprises a fully defined sequence of 112 or 113 amino acids (SEQ ID NO: 2 or 10), is new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a human or humanized SM5-1 specific monoclonal antibody, where the variable region of heavy chain of the human SM5-1 specific monoclonal antibody comprises SEQ ID NO: 1 or 9, and the variable region of light chain comprises SEQ ID NO: 2 or 10; (2) an isolated nucleic acid comprising a nucleotide sequence encoding the heavy chain and/or light chain, or its fragment, of the antibody cited above and/or the antibody of (1); (3) an isolated nucleic acid comprising a nucleotide sequence complementary to the nucleotide sequence of (2); (4) a vector comprising the nucleic acid of (2); (5) a recombinant cell containing the nucleic acid of (2); (6) producing an antibody, or its fragment, comprising growing a recombinant cell containing the nucleic acid of (2), so that the encoded antibody, or its fragment, is expressed by the cell, where the antibody is a human or humanized antibody, and recovering the expressed antibody, or its fragment; (7) a pharmaceutical composition comprising the antibody cited above, or the humanized antibody of (1) and a pharmaceutical carrier or excipient, where the variable region of heavy chain of the humanized SM5-1 specific monoclonal antibody comprises the amino acid sequences 31-35, 50-66 and 99-108 of SEQ ID NO: 1 and the variable region of light chain comprises the amino acid sequences 24-40, 56-62 and 95-102 of SEQ ID NO: 2; (8) a kit comprising the antibody cited above, or the human or humanized antibody of (1), where the variable region of heavy chain of the humanized SM5-1 specific monoclonal antibody comprises the amino acid sequences 31-35, 50-66 and 99-108 of SEQ ID NO: 1 and the variable region of light chain comprises the amino acid sequences 24-40, 56-62 and 95-102 of SEQ ID NO: 2; (9)

treating neoplasm in a mammal, comprising administering to a mammal to which such treatment is needed or desirable, the antibody cited above or the combination of (10); (10) a combination comprising the antibody cited above, and an anti-neoplasm agent; (11) inducing caspase-10 mediated apoptosis in a cell, comprising administering to a cell to which the induction is needed or desirable, an effective amount of the antibody cited above; (12) a conjugate comprising the antibody cited above conjugated to a toxin and/or a radioactive isotope; (13) assaying for human SM5-1 target antigen in a sample, comprising obtaining a sample from a subject to be tested, contacting the sample with an antibody cited above to allow binding between the human SM5-1 target antigen, if present in the sample, to the antibody, and assessing binding between the human SM5-1 target antigen, if present in the sample, to the antibody to determine presence, absence and/or amount of the human SM5-1 target antigen in the sample; and (14) a kit for assaying for human SM5-1 target antigen in a sample, comprising the antibody cited above or the antibody of (1), and means for assessing binding between the human SM5-1 target antigen, if present in the sample, to the antibody to determine presence, absence and/or amount of the human SM5-1 target antigen in the sample.

BIOTECHNOLOGY - Preferred Antibody: The antibody cited above is a polyclonal antibody, a monoclonal antibody, a Fab fragment, a Fab' fragment, a F(ab')2 fragment, a Fv fragment, a diabody, a single-chain antibody or a multi-specific antibody formed from antibody fragments. The variable region of heavy chain of the antibody comprises the amino acid sequences 31-35, 50-66 and 99-108 in SEQ ID NO: 1 or 9 and the variable region of light chain of said antibody comprises the amino acid sequences 24-40, 56-62 and 95-102 in SEQ ID NO: 2 or 10. The variable region of heavy chain of the antibody further comprises the amino acid sequence in SEQ ID NO: 1 or 9, and the variable region of light chain of the antibody comprises the amino acid sequence in SEQ ID NO: 2 or 10. The antibody having a variable region of heavy chain with SEQ ID NO: 1 is a humanized antibody. The variable region of heavy chain of the antibody further comprises a fully defined sequence of 119 amino acids (SEQ ID NO: 3), and the variable region of light chain of the antibody comprises a fully defined sequence of 113 amino acids (SEQ ID NO: 4). Preferred Nucleic Acid: The nucleic acid further comprises a fully defined sequence of 357 or 339 base pairs (SEQ ID NO: 11 or 12). Preferred Vector: The vector further comprises expression modulation sequence operatively linked to the nucleic acid encoding the heavy and/or light chain, or its fragments, to the antibody. Preferred Recombinant Cell: The recombinant cell is a eukaryote or Chinese hamster ovary (CHO) cell. Preferred Method: Producing an antibody further comprises isolating and/or purifying the recovered antibody or its fragment. The mammal treated with is a human. The neoplasm is melanoma, breast cancer or hepatocellular carcinoma. The antibody is a human SM5-1 specific monoclonal antibody, and exerts its anti-neoplasm effect via antibody dependent cell mediated cytotoxicity (ADCC) or complement dependent cell mediated cytotoxicity (CDC). The cell in inducing caspase-10 mediated apoptosis is a mammalian cell, or is contained in a mammal. Assaying for human SM5-1 target antigen is used in the prognosis or diagnosis of a neoplasm that is a melanoma, breast cancer or hepatocellular carcinoma. Preferred Combination: The anti-neoplasm agent in the combination is an agent that treats melanoma, breast cancer or hepatocellular carcinoma.

ACTIVITY - Cytostatic. 32 tumor-bearing nude mice (bearing QYC cells) were randomly divided into 4 groups with 8 mice for each group. The labeled antibodies were injected into tail vein at a dosage of 5 GBq/kg for the therapeutic group. Eight weeks later, the tumor volume and survival condition were recorded. The results showed that the 131I

labeled chimeric and humanized anti-human SM5-1 monoclonal antibodies were effective for tumor (hepatocellular carcinoma cells) bearing mice. These antibodies reduced tumor mass significantly and improved survival rate of tumor-bearing mice.

MECHANISM OF ACTION - Gene-Therapy.

USE - The methods and compositions of the present invention are useful in the fields of cancer biology and immunotherapy, in particular for diagnosing and treating malignancies such as melanoma, breast cancer or hepatocellular carcinoma.

ADMINISTRATION - Dosage of the pharmaceutical composition ranges from 100 mug/kg to 10 mg/kg body weight. Routes of administration of the pharmaceutical compositions include oral, intramuscular, intraperitoneal, intravenous, subcutaneous and mucosal.

EXAMPLE - The VH of the human antibody KOL was chosen as framework for the humanized heavy chain and the VL of human Bence-Jones protein REI was chosen for the humanized light chain. The three CDRs from mSNM5-1 light chain or heavy chain were directly grafted into human antibody light or heavy chain framework regions to generate a humanized antibody gene. The light and heavy variable region genes of humanized antibodies were synthesized by overlapping PCR method. The humanized VL and VH were cloned into pMG18-3K expression vector and was expressed transiently in COS cells yielding humanized version. Humanized antibody in COS cell culture supernatant was quantitated by ELISA and the binding of this to hepatocellular carcinoma cell line QYC was determined by FCM. The antigen binding activity assay indicated that this antibody bound poorly to human melanoma cells. The humanized version was designated as ReSM5-1 and its variable region of heavy chain comprises a fully defined sequence of 119 amino acids (SEQ ID NO: 1) and the variable region of light chain comprises a fully defined sequence of 112 (SEQ ID NO: 2).(85 pages)

L6 ANSWER 10 OF 19 BIOTECHDS COPYRIGHT 2008 THE THOMSON CORP. on STN
DUPLICATE 10
ACCESSION NUMBER: 2005-31210 BIOTECHDS
TITLE: New antibodies specific for SM5-1 antigen, useful for treating cancer, e.g. melanoma, breast cancer or hepatocellular carcinoma;
involving vector-mediated gene transfer and expression in Chinese hamster ovary for use in cancer diagnosis and prognosis
AUTHOR: MA J; GUO Y
PATENT ASSIGNEE: ONCOMAX ACQUISITION CORP
PATENT INFO: US 2005232926 20 Oct 2005
APPLICATION INFO: US 2004-4659 2 Dec 2004
PRIORITY INFO: CN 2003-1119926 25 Nov 2003; EP 2003-129123 6 Jun 2003
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2005-745045 [76]
AN 2005-31210 BIOTECHDS
AB DERWENT ABSTRACT:
NOVELTY - A humanized or human antibody which binds to an antigen which is bound by a murine antibody produced by hybridoma cells deposited with the American Type Culture Collection under Deposit Designation of HB-12588 or a murine antibody which has a heavy chain variable region sequence comprising 119 amino acids (SEQ ID NO: 3) and a light chain variable region sequence comprising 113 amino acids (SEQ ID NO: 4), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) an isolated nucleic acid comprising a nucleotide sequence encoding the heavy chain and/or the light chain, or their fragment, of the humanized or human antibody above; (2) a vector containing the nucleic acid of (1); (3) a recombinant cell containing the nucleic acid of (1); (4) a pharmaceutical composition comprising an amount of the humanized or human

antibody above and a pharmaceutical carrier or excipient; (5) a kit comprising an amount of an antibody above and instructions for administering the antibody, where the antibody is a human antibody; (6) a combination comprising an amount of the humanized or human antibody above, and an amount of an anti-cancer agent; (7) a method for treating cancer in a mammal; (8) a method for inducing caspase-10 mediated apoptosis in a cell; (9) a conjugate comprising the humanized or human antibody above conjugated to a toxin and/or a radioactive isotope; and (10) a method for assaying for a human target antigen in a sample.

BIOTECHNOLOGY - Preferred Antibody: The humanized or human antibody binds to an epitope which is different from the epitope bound by the murine antibody. The humanized or human antibody binds to an epitope of the antigen which is the same as the epitope bound by the murine antibody. The human or humanized antibody is a polyclonal antibody, a monoclonal antibody, a Fab fragment, a Fab' fragment, a F(ab')2 fragment, a Fv fragment, a diabody, a single-chain antibody, or a multi-specific antibody formed from antibody fragments. The humanized or human antibody competitively inhibits the binding of a murine antibody for breast cancer MCF7 cell line (ATCC HTB-22) or melanoma cell line A375.S2 (ATCC CRL-1872), where the murine antibody is produced by hybridoma cells deposited with the American Type Culture Collection under Deposit Designation of HB-12588 or a murine antibody which has a heavy chain variable region sequence of SEQ ID NO: 3 and a light chain variable region sequence of SEQ ID NO: 4. Preferred Vector: The vector further comprises an expression modulation sequence operatively linked to the nucleic acid encoding the heavy chain and/or the light chain, or their fragment, of the antibody. Preferred Recombinant Cell: The recombinant cell is a eukaryote cell, preferably a CHO cell. Preferred Combination: The anticancer agent is an agent that is used for treating melanoma, breast cancer or hepatocellular carcinoma. Preferred Method: Treating cancer in a mammal comprises administering to the mammal an amount of the humanized or human antibody above, where cancer cells of the cancer express an antigen described above. The mammal is a human. The humanized or human antibody is a human or humanized monoclonal antibody. The humanized or human antibody exerts its anti-cancer effect via antibody dependent cell mediated cytotoxicity (ADCC) or complement dependent cell mediated cytotoxicity (CDC). Alternatively, the method comprises administering to the mammal, an amount of a combination of (6). Treating cancer in a mammal comprises administering to the mammal, an amount of an antibody, where the administered antibody: (a) reacts with an antigen bound by (i) a murine antibody produced by hybridoma cells deposited with the American Type Culture Collection under Deposit Designation of HB-12588 or (ii) a murine antibody which has a heavy chain variable region sequence of SEQ ID NO: 3 and a light chain variable region sequence of SEQ ID NO: 4; or (b) competitively inhibits the binding of a murine antibody for breast cancer MCF7 cell line (ATCC HTB-22) or melanoma cell line A375.S2 (ATCC CRL-1872), where the competitively inhibited murine antibody is produced by hybridoma cells deposited with the American Type Culture Collection under Deposit Designation of HB-12588 or has a heavy chain variable region sequence of SEQ ID NO: 3 and a light chain variable region sequence of SEQ ID NO: 4. The administered antibody is not the murine antibody produced by hybridoma cells deposited with the American Type Culture Collection under Deposit Designation of HB-12588. Inducing caspase-10 mediated apoptosis in a cell comprises contacting the cell with an amount of the humanized or human antibody above. The cell is a mammalian cell. The cell is contained in a mammal. Assaying for a human target antigen in a sample comprises: (a) obtaining a sample from a subject to be tested; (b) contacting the sample with an antibody to the target antigen under conditions to allow binding between the target antigen, if present in the sample, to the antibody; and (c) assessing binding between the human target antigen, if present in the sample, to the antibody to determine presence, absence and/or amount

of the human target antigen in the sample, where the antibody binds to an antigen described above, and where the sample is other than a tissue from a melanoma patient. The method is used in the prognosis or diagnosis of a cancer. The antibody used in step (b) is or is not the murine antibody produced by hybridoma cells deposited with the American Type Culture Collection under Deposit Designation of HB-12588.

ACTIVITY - Cytostatic; Apoptotic. Forty female nude mice were inoculated subcutaneously (s.c.) with QYC. After seven weeks, tumor masses reached 0.5 cm in diameter. Mice were randomly divided into 5 groups: 8 mice for PBS group; 8 mice for non-related antibody, chimeric anti-human CD3 mAb, 4 mg/kg; 8 mice for humanized anti-human CD3 mAb, 4 mg/kg; 8 mice for anti-human SM5-1 chimeric mAb, 4 mg/kg; 8 mice for anti-human SM5-1 humanized mAb, 4 mg/kg. Four mAbs were diluted into final concentration 0.4 mg/ml with PBS. Mice were tail vein injected at 4 mg/kg/week through tail vein, with the control injected equal volume of PBS. According to body weight of nude mice, injection volume was about 250 mul for each nude mouse. After 6 weeks, size of the tumor mass was measured in each mouse and statistical analyzed. Results indicated that both chimeric and humanized anti-human SM5-1 monoclonal antibodies were effective in controlling the size of the tumor mass formed by human hepatocellular carcinoma cell line QYC. These antibodies may function via ADCC and/or CDC.

MECHANISM OF ACTION - Antibody therapy.

USE - The antibody, composition, and method are useful for treating cancer, e.g. melanoma, breast cancer or hepatocellular carcinoma, a primary cancer, or metastatic cancer. The antibody is also useful for assaying the cancer antigen, especially for the diagnosis or prognosis of cancer. (All claimed).

ADMINISTRATION - Dosage is 100-750 micrograms/kg by injection (e.g. intraperitoneal, intravenous, subcutaneous, or intramuscular), oral, or mucosal means.

EXAMPLE - CHOdhfr-cells were maintained in complete DMEM medium. Appropriate expression vector was transfected into CHOdhfr-cells using Lipofectamine 2000 reagent. The transfected cells were then selected. Drug resistant clones were picked and expanded for further analysis. The culture supernatants from cell clones were analyzed for antibody production by the sandwich ELISA which used goat anti-human IgG(Fc) as capture antibody and goat anti-human kappa-HRP as detector antibody. Purified human IgG1/Kappa was used as a standard in the ELISA assay. The clone producing the highest amount of antibody was selected and grown in serum-free medium. The recombinant antibody (ReSM5-1) was purified by Protein A affinity chromatography from the serum-free culture supernatant.(41 pages)

L6 ANSWER 11 OF 19 BIOTECHDS COPYRIGHT 2008 THE THOMSON CORP. on STN
DUPLICATE 11

ACCESSION NUMBER: 2005-07749 BIOTECHDS
TITLE: New antibody that competitively inhibits the immunospecific binding of a human SM5-1 specific monoclonal antibody to a SM5-1 target antigen, useful for diagnosing or treating neoplasms, e.g. melanoma or breast cancer;
antibody production against human SM5-1 for use in disease therapy and diagnosis
AUTHOR: MA J; GUO Y
PATENT ASSIGNEE: MA J; GUO Y
PATENT INFO: US 2005031617 10 Feb 2005
APPLICATION INFO: US 2003-722849 26 Nov 2003
PRIORITY INFO: CN 2003-1119926 25 Nov 2003; CN 2003-129123 6 Jun 2003
DOCUMENT TYPE: Patent
LANGUAGE: English

OTHER SOURCE: WPI: 2005-131967 [14]
AN 2005-07749 BIOTECHDS
AB DERWENT ABSTRACT:
NOVELTY - An antibody that competitively inhibits the immunospecific binding of a human SM5-1 specific monoclonal antibody to a SM5-1 target antigen, where the variable region of heavy chain of the human SM5-1 specific monoclonal antibody comprises 119 amino acids (SEQ ID NO. 1 or 9) and the variable region of light chain of the human SM5-1 specific monoclonal antibody comprises 113 amino acids (SEQ ID NO. 2 or 10), is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) a human SM5-1 specific monoclonal antibody, where the variable region of heavy chain of the human SM5-1 specific monoclonal antibody comprises SEQ ID NO. 9 and the variable region of light chain of the human SM5-1 specific monoclonal antibody comprises SEQ ID NO. 10; (2) a humanized SM5 -1 specific monoclonal antibody, where the variable region of heavy chain of the humanized antibody comprises SEQ ID NO. 1 and the variable region of light chain of the humanized antibody comprises SEQ ID NO. 2; (3) an isolated nucleic acid comprising: (a) a nucleotide sequence encoding the heavy chain and/or the light chain or a fragment of the antibody; (b) a nucleotide sequence encoding the heavy chain and/or the light chain or a fragment of the human SM5-1 specific monoclonal antibody; (c) a nucleotide sequence encoding the heavy chain and/or the light chain or a fragment of the humanized antibody; or (d) a nucleotide sequence complementary to the nucleotide sequences above; (4) a vector containing the nucleic acid of (3); (5) a recombinant cell containing the nucleic acid of (3); (6) a method of producing the antibody or its fragment; (7) a pharmaceutical composition comprising: (a) an amount of the antibody and a pharmaceutical carrier or excipient, where the antibody is a human antibody; or (b) an amount of a humanized SM5-1 specific monoclonal antibody and a pharmaceutical carrier or excipient, where the variable region of heavy chain of the humanized SM5-1 specific monoclonal antibody comprises the amino acid sequences 31-35, 50-66, and 99-108 of SEQ ID NO. 1 and the variable region of light chain of the SM5-1 specific monoclonal antibody comprises the amino acid sequences 24-40, 56-62, and 95-102 of SEQ ID NO. 2; (8) a kit comprising: (a) an amount of an antibody and an instruction means for administering the antibody, where the antibody is a human antibody; or (b) an amount of a humanized SM5-1 specific monoclonal antibody and an instruction means for administering the antibody; (9) treating neoplasm in a mammal; (10) a combination comprising: (a) an amount of the antibody; and (b) an amount of an anti-neoplasm agent; (11) inducing caspase-10 mediated apoptosis in a cell; (12) a conjugate comprising the antibody conjugated to a toxin and/or a radioactive isotope; (13) assaying for human SM5-1 target antigen in a sample; and (14) a kit for assaying for human SM5-1 target antigen in a sample comprising: (a) the antibody; and (b) means for assessing binding between the human SM5-1 target antigen, if present in the sample, to the antibody to determine presence, absence, and/or amount of the human SM5-1 target antigen in the sample.

BIOTECHNOLOGY - Preferred Antibody: The antibody is selected from polyclonal antibody, monoclonal antibody, Fab fragment, Fab' fragment, F(ab')2 fragment, Fv fragment, diabody, single-chain antibody, or multi-specific antibody formed from antibody fragments. The variable region of heavy chain of the antibody comprises the amino acids 31-35, 50-66, and 99-108 of SEQ ID NO. 1 or 9 and the variable region of light chain of the antibody comprises the amino acids 24-40, 56-62, and 95-102 of SEQ ID NO. 2 or 10. The variable region of heavy chain of the antibody comprises SEQ ID NO. 9, and the variable region of light chain of the

antibody comprises SEQ ID NO. 10. Preferably, the antibody is a humanized antibody. The variable region of heavy chain of the antibody comprises 119 amino acids (SEQ ID NO. 3) and the variable region of light chain of the antibody comprises 113 amino acids (SEQ ID NO. 4). Preferred Nucleic Acid: The nucleic acid comprises 357 (SEQ ID NO. 5 or 11) or 339 bp (SEQ ID NO. 6 or 12). Preferred Vector: The vector further comprises expression modulation sequence operatively linked to the nucleic acid encoding the heavy chain and/or the light chain or a fragment of the antibody. Preferred Cell: The recombinant cell is a eukaryotic cell. Preferably, it is a CHO cell. Preferred Method: Producing an antibody or its fragment comprises growing a recombinant cell containing the nucleic acid so that the encoded antibody or its fragment is expressed by the cell, where the antibody is a human antibody, and recovering the expressed the antibody or fragment. It further comprises isolating and/or purifying the recovered antibody or fragment. Treating neoplasm in a mammal comprises administering to a mammal to which the treatment is needed or desirable, an amount of the antibody. The mammal is a human. The neoplasm is melanoma, breast cancer, or hepatocellular carcinoma. The antibody is a human SM5-1 specific monoclonal antibody. It exerts its anti-neoplasm effect via antibody dependent cell mediated cytotoxicity (ADCC) or complement dependent cell mediated cytotoxicity (CDC). The antibody is also a humanized antibody, where the variable region of heavy chain of the humanized antibody comprises the amino acid sequences 31-35, 50-66, and 99-108 of SEQ ID NO. 1 and the variable region of light chain of the humanized antibody comprises the amino acid sequences 24-40, 56-62, and 95-102 of SEQ ID NO. 2. Alternatively, treating neoplasm in a mammal comprises administering to a mammal to which the treatment is needed or desirable, an amount of the combination. Inducing caspase-10 mediated apoptosis in a cell comprises administering to a cell to which the induction is needed or desirable, an amount of the antibody. The cell is a mammalian cell or is contained in a mammal. Assaying for human SM5-1 target antigen in a sample comprises: (a) obtaining a sample from a subject to be tested; (b) contacting the sample with an antibody to allow binding between the human SM5-1 target antigen, if present in the sample, to the antibody; and (c) assessing binding between the human SM5-1 target antigen, if present in the sample, to the antibody to determine presence, absence, and/or amount of the human SM5-1 target antigen in the sample. Preferred Combination: The anti-neoplasm agent is an agent that treats melanoma, breast cancer, or hepatocellular carcinoma.

ACTIVITY - Cytostatic. No biological data given.

MECHANISM OF ACTION - Gene Therapy.

USE - The method of assaying for human SM5-1 target antigen in a sample is useful for the prognosis or diagnosis of a neoplasm. The neoplasm is melanoma, breast cancer, or hepatocellular carcinoma (all claimed). The antibody is useful for the diagnosis and treatment of neoplasms, including melanoma, breast cancer, or hepatocellular carcinoma.

ADMINISTRATION - Dosage is 100 microg/kg - 200 mg/kg body weight. Administration can be intraperitoneally, intravenously, subcutaneously, intramuscularly, or orally.

EXAMPLE - No suitable example given. (40 pages)

L6 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:1106731 HCAPLUS

DOCUMENT NUMBER: 143:362850

TITLE: Method and monoclonal antibody composition for diagnosis of melanocytic lesions and for immunotherapy against melanoma

INVENTOR(S): Guo, Yajun; Ma, Jing

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: U.S. Pat. Appl. Publ., 12 pp., Cont. of U.S. Ser. No. 915,746.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2005227303	A1	20051013	US 2005-146518		20050606
PRIORITY APPLN. INFO.:			US 1998-110516P	P	19981201
			US 1999-451353	B1	19991201
			US 2001-915746	A1	20010726

AB This invention relates to monoclonal antibodies that recognize an antigen specific to melanocytic lesions. These antibodies are useful in methods of isolating melanoma cells and diagnosing melanocytic lesions. These antibodies are also useful for immunotherapy against melanoma. Monoclonal antibody SM5-1 was prepared by immunizing mice with human melanoma cell lines SMMU-1 and SMMU-2 and using the splenocytes to make hybridomas. SM5-1 was used in immunohistochem. staining of tissues. The antibody stained melanoma tissues but did not stain non-melanocytic malignant tumors or most normal human tissues.

L6 ANSWER 13 OF 19 MEDLINE on STN DUPLICATE 12
ACCESSION NUMBER: 2005531121 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16148409
TITLE: Differential expression of MART-1, tyrosinase, and SM5-1 in primary and metastatic melanoma.
AUTHOR: Reinke Susanne; Koniger Peter; Herberth Gunda; Audring Heike; Wang Hao; Ma Jing; Guo Yajun; Sterry Wolfram; Trefzer Uwe
CORPORATE SOURCE: Department of Dermatology and Allergy, Skin Cancer Centre, Charite-Universitaetsmedizin Berlin, Germany.
SOURCE: The American Journal of dermatopathology, (2005 Oct) Vol. 27, No. 5, pp. 401-6.
Journal code: 7911005. ISSN: 0193-1091.
PUB. COUNTRY: United States
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200512
ENTRY DATE: Entered STN: 7 Oct 2005
Last Updated on STN: 22 Dec 2005
Entered Medline: 20 Dec 2005

AB The new monoclonal antibody SM5-1 has been shown to have significant advantages in immunohistochemistry of melanoma over currently used antibodies such as HMB-45 or anti-S100. In this study we compared the immunohistological staining pattern of SM5-1 with that of the more recently described antibodies A103 (anti-MART-1) and T311 (anti-Tyrosinase) in 344 paraffin-embedded melanoma specimens, consisting of 101 primary melanomas (77 SSM, 16 NM, 6 ALM, 2 LMM) and 243 melanoma metastases. The overall reactivity of SM5-1 for all the specimens was 92% (318/344) compared with 83% (285/344) for MART-1 and 71% (245/344) for Tyrosinase. Staining of melanoma metastases with SM5-1 was found in 91% (222/243), but only in 77% (187/243) with A103 and 63% (154/243) with T311, respectively. Staining with SM5-1 was more homogenous with 196 of 243 (80%) of metastatic lesions showing 50% or more positively stained cells within the lesions, whereas A103 and T311 did so

in 141 of 243 (58%) or 117 of 243 (48%) of the lesions. With regard to staining intensity of SM5-1, 157 of 243 (64%) showed a strong or very strong staining intensity, whereas A103 and T311 did so in 85 of 243 (35%) or 70 of 243 (29%) of the lesions. Staining intensity and percentage positivity correlated well for SM5-1, because from the 58 very strong positive metastases 55 showed staining in more than 75% of the cells within a lesion. Importantly, 52 of 56 MART-1-negative metastases and 81 of 89 Tyrosinase-negative metastases were positive for SM5-1. Thirty-eight metastases (15.6%) were negative for both A103 and T311. Of those, 35 (92.1%) were positive for SM5-1, demonstrating the value of SM5-1 in identifying melanoma-associated antigen-negative lesions. We conclude that SM5-1 could be of value in immunohistochemistry of melanoma.

L6 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:1071575 HCAPLUS
DOCUMENT NUMBER: 143:345346
TITLE: preparation and applications of a monoclonal antibody against melanoma associated antigen composition
INVENTOR(S): Ma, Jing; Wang, Hao; Liu, Qingfa
PATENT ASSIGNEE(S): Shanghai CP Guojian Pharmaceutical Co., Ltd., Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 20 pp. CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1443778	A	20030924	CN 2002-111030	20020313
PRIORITY APPLN. INFO.:			CN 2002-111030	20020313

AB A monoclonal antibody SM5-1 against melanoma specific antigen is produced from the B cell hybridoma line (ATCC No.HB-12,588). The prepared antibody is used to detect and sep. melanoma cells. SM5-1 is also used to screen melanoma specific antigen from melanoma cDNA library transfected COS-7 cells. Fusion protein and anti-melanoma drugs containing SM5-1 are also prepared

L6 ANSWER 15 OF 19 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:51064 SCISEARCH
THE GENUINE ARTICLE: 756LU
TITLE: Monoclonal antibody SM5-1 can inhibit tumor cells' growth and induce caspase-10 related apoptosis.
AUTHOR: Dai J X (Reprint); Jin J; Yang S L; Ma J; Qian W Z; Wang H; Guo Y J
CORPORATE SOURCE: Eppley Inst Res Canc, Omaha, NE USA; Shanghai Int Joint Canc Inst, Shanghai, Peoples R China
COUNTRY OF AUTHOR: USA; Peoples R China
SOURCE: CLINICAL CANCER RESEARCH, (1 DEC 2003) Vol. 9, No. 16, Part 2, Supp. [S], pp. 6206S-6207S. ISSN: 1078-0432.
PUBLISHER: AMER ASSOC CANCER RESEARCH, 615 CHESTNUT ST, 17TH FLOOR, PHILADELPHIA, PA 19106-4404 USA.
DOCUMENT TYPE: Conference; Journal
LANGUAGE: English
REFERENCE COUNT: 0
ENTRY DATE: Entered STN: 23 Jan 2004

Last Updated on STN: 23 Jan 2004

L6 ANSWER 16 OF 19 MEDLINE on STN DUPLICATE 13
ACCESSION NUMBER: 2001233052 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11214818
TITLE: SM5-1: a new monoclonal antibody which is highly sensitive and specific for melanocytic lesions.
AUTHOR: Trefzer U; Rietz N; Chen Y; Audring H; Herberth G; Siegel P; Reinke S; Koniger P; Wu S; Ma J; Liu Y; Wang H; Sterry W; Guo Y
CORPORATE SOURCE: Department of Dermatology and Allergy, Charite, Humboldt University Berlin, Germany.. uwe.trefzer@charite.de
SOURCE: Archives of dermatological research, (2000 Dec) Vol. 292, No. 12, pp. 583-9.
Journal code: 8000462. ISSN: 0340-3696.
PUB. COUNTRY: Germany: Germany, Federal Republic of
DOCUMENT TYPE: (COMPARATIVE STUDY)
Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 17 May 2001
Last Updated on STN: 17 May 2001
Entered Medline: 3 May 2001

AB Antibodies such as HMB-45 and anti-S100 protein have been widely used as markers of malignant melanoma despite evidence that HMB-45 has a sensitivity of only 67-93% and S100 is nonspecific for melanoma. Using a subtractive immunization protocol in a mouse model of human melanoma, we have generated several monoclonal antibodies with putative specificity for melanoma. After initial screenings, the antibody SM5-1 was chosen because of its intriguing reactivity with melanocytic tumors in both frozen and paraffin sections. The immunohistochemical staining of SM5-1 was studied in paraffin-embedded specimens of 401 melanomas (n = 401; 250 primary melanomas, 151 metastases), melanocytic nevi of the skin (n = 16), nonmelanocytic neoplasms (n = 84). The results were compared with HMB-45 and anti-S100 staining. All antibodies reacted with nevi and 97-99% with primary melanomas. Whereas both SM5-1 and anti-S100 stained 96% (146/151) of melanoma metastases, HMB-45 correctly identified only 83% (126/151). All HMB-45-negative metastases were positive for SM5-1. Whereas neither SM5-1 nor HMB-45 stained any of 84 specimens from 40 different nonmelanocytic neoplasms, anti-S100 was positive in 21/84 (25%). While the staining pattern of SM5-1 was mostly homogeneous, small tumor areas in some metastases remained unstained. Staining with SM5-1 was also observed in perivascular dendritic cells, in plasma cells, some myofibroblasts and the secretion of eccrine sweat glands. Nonactivated epidermal melanocytes, keratinocytes, endothelial cells, smooth muscle cells and peripheral nerves were all negative for SM5-1. These results suggest that SM5-1 is highly specific, as well as sensitive, for melanocytic lesions and is useful in the immunohistochemical evaluation of melanoma.

L6 ANSWER 17 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN DUPLICATE 14
ACCESSION NUMBER: 1998:248010 BIOSIS
DOCUMENT NUMBER: PREV199800248010
TITLE: SM5-1: A new monoclonal antibody which is highly sensitive and specific for melanocytic tumors.
AUTHOR(S): Trefzer, Uwe; Herberth, Gunda; Chen, Ying-Wen; Rietz, Nadine; Audring, Heike; Siegel, Petra; Adrian, Karin;

Winter, Helmut; Guo, Ya-Jun; Sterry, Wolfram
CORPORATE SOURCE: Dep. Dermatol., Humboldt-Univ., Charite, Berlin, Germany
SOURCE: Journal of Investigative Dermatology, (April, 1998) Vol. 110, No. 4, pp. 581. print.
Meeting Info.: Annual Meeting of the International Investigative Dermatology. Cologne, Germany. May 7-10, 1998. The Society for Investigative Dermatology, Inc.
CODEN: JIDEAE. ISSN: 0022-202X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 4 Jun 1998
Last Updated on STN: 4 Jun 1998

L6 ANSWER 18 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:292615 BIOSIS
DOCUMENT NUMBER: PREV199800292615
TITLE: SM5-1: A new monoclonal antibody which is highly sensitive and specific for melanocytic tumors.
AUTHOR(S): Trefzer, Uwe; Herberth, Gunda; Chen, Ying-Wen; Rietz, Nadine; Audring, Heike; Siegel, Petra; Adrian, Karin; Winter, Helmut; Guo, Ya-Jun; Sterry, Wolfram
CORPORATE SOURCE: Dep. Dermatology, Humbodlt-Univ., Chartie, Berlin, Germany
SOURCE: Journal of Dermatological Science, (March, 1998) Vol. 16, No. SUPPL. 1, pp. S110. print.
Meeting Info.: Third Joint Meeting of the European Society for Dermatological Research, Japanese Society for Investigative Dermatology, Society for Investigative Dermatology. Cologne, Germany. May 7-10, 1998. European Society for Dermatological Research; Japanese Society for Investigative Dermatology; Society for Investigative Dermatology.
CODEN: JDSCEI. ISSN: 0923-1811.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 8 Jul 1998
Last Updated on STN: 8 Jul 1998

L6 ANSWER 19 OF 19 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:457759 BIOSIS
DOCUMENT NUMBER: PREV199800457759
TITLE: A melanoma associated fibronectin variant characterized by monoclonal antibody SM5-1.
AUTHOR(S): Chen, Y.; Guo, Y. J.; Herberth, G.; Adrian, K.; Siegel, P.; Audring, H.; Hansen-Hagge, T.; Sterry, W.; Trefzer, U.
CORPORATE SOURCE: Dep. Dermatol., Charite, Humboldt Univ., 10115 Berlin, Germany
SOURCE: Journal of Molecular Medicine (Berlin), (May, 1998) Vol. 76, No. 6, pp. B11. print.
Meeting Info.: 2nd Congress of Molecular Medicine. Berlin, Germany. May 6-9, 1998.
ISSN: 0946-2716.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 30 Oct 1998
Last Updated on STN: 30 Oct 1998

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=> display history full l1-l6

     (FILE 'MEDLINE, BIOSIS, LIFESCI, BIOTECHDS, SCISEARCH, EMBASE, HCAPLUS'
     ENTERED AT 23:56:00 ON 07 FEB 2008)
L1            70 SEA ABB=ON  SM5(W)(1 OR I)
L2         25513 SEA ABB=ON  (GUO, Y?)/AU
L3         26479 SEA ABB=ON  (MA, J?)/AU
L4         51415 SEA ABB=ON  L2 OR L3
L5            53 SEA ABB=ON  L1 AND L4
L6            19 DUP REM L5 (34 DUPLICATES REMOVED)
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     through 1968.  These records have been re-indexed to match current
     BIOSIS indexing.

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     FILE BIOTECHDS
     FILE LAST UPDATED: 4 JAN 2008       <20080104/UP>
     FILE COVERS 1982 TO DATE

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     SCISEARCH has been reloaded, see HELP RLOAD for details.

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      FILE COVERS 1974 TO 7 Feb 2008 (20080207/ED)

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      and biweekly.

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      substance identification.

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FILE COVERS 1907 - 7 Feb 2008 VOL 148 ISS 6
FILE LAST UPDATED: 6 Feb 2008 (20080206/ED)

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